Fire Commissioner's Statistical Report

Alberta
LABOUR
Fire Prevention Branch

1 9 8 8

91-04954/

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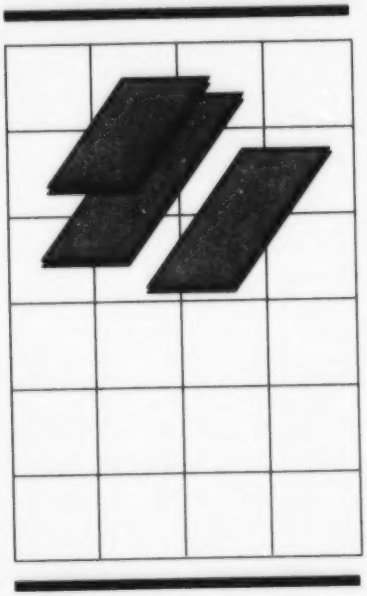

Introduction

Fire Commissioner's
Statistical Report

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69th Statistical Report of the Fire Commissioner

Fire Commissioner – T. B. Makey

The Fire Prevention Branch promotes fire protection in Alberta through a number of programs. These include the prevention of fires through public education, fire safety monitoring, advisory services and the collection and dissemination of fire loss data. Training in all aspects of fire protection, including prevention and suppression, is made available by the Branch to municipal and industrial fire departments through the Alberta Fire Training School (AFTS), located at Vermilion, and field staff located in regional offices. The Branch also assists with the enforcement of laws related to the suppression of arson.

A total of 8,278 fires were recorded for the province in 1988. These fires resulted in 40 fire deaths, 19 deaths involving fire (see glossary), 425 injuries and $87.3 million in property losses. Compared to 1987, fire incidents increased by 3.3 percent, and the number of fire deaths increased by 2.5 percent. Deaths involving fire showed a decrease of 26.9 percent, and the number of injuries increased by 11.5 percent. The dollar losses decreased by 44 percent over the previous year. The major reason for the decreased property losses in 1988 was that in 1987 there was a $50 million estimated loss from a fire at an oil sands plant in northern Alberta.

Homes, representing one and two family dwellings, apartment/tenements and mobile homes, accounted for a total of 2,162 fires which caused 34 fire deaths, 2 deaths involving fire, 229 injuries and $27.5 million in property losses. Eighty- five percent of all fire deaths and 54 percent of all fire injuries in 1988 occurred in home fires. There were no smoke alarms in 54 percent of the homes that had fires last year. However, it is encouraging to note that occupants were alerted in 83 percent of the home fires where smoke alarms activated. Five data Tables in Section 2 of this report are devoted to an analysis of home fires in Alberta.

On site municipal course attendance at AFTS decreased by 73 or 8.73 percent, while AFTS-sponsored local and extension course attendance increased from 684 to 973, a 42.2 percent increase. A total of 1,701 man weeks of municipal training, 14.2 percent more than 1987-88 were delivered in 1988-89. Industrial training increased also, from 464 to 497 an increase of 7.11 percent. Attendance at AFTS seminars dropped from 84 to 23, a 72.6 percent decrease.

A total of 1,239 fire investigations were conducted by Branch staff, police and fire departments, which is an increase of 23 percent over last year: 359 of these investigations were conducted by Branch staff. The number of fires determined to be caused by arson rose by 37.9 percent to 1,180. This increase indicates the need to continue a strong effort to determine accurately the cause of all fires and to expose cases of arson, insurance fraud and other crimes.

The "routine" inspection program was eliminated April 1, 1988, however any outstanding fire safety concerns previously identified are being dealt with. In an effort to eliminate outstanding Fire Code violations Branch staff conducted 1,902 re-inspections during the year. The hazards identified during these inspections resulted in 3,804 recommendations being issued to correct them. It was necessary for Branch staff to issue 29 orders to owners or occupants of the properties inspected. This project will continue into next year.

As of December 31, 1988 the membership of the Council was:

Harry Dowhan - P. Eng. Chairman
Jack Edworthy - 1st Vice-chairman
Douglas Kometz - 2nd Vice-chairman

Raymond Caouette	Kent Lee
Ronald Faulkner	Don Murray
Keith Gilker	Wayne Stanyer
Graeme Leadbeater	Allen Stephanson

The Fire Prevention Council is a quasi-judicial body of 11 individuals appointed by the Lieutenant-Governor-in-Council from a broad range of private sector organizations with fire safety interests. The Council is

responsible to advise the Minister of Labour on fire prevention matters and to hear appeals on orders issued by Branch inspectors or by fire department personnel authorized as local assistants to the Fire Commissioner.

The Alberta Fire Prevention Council, in its sixth year of operation, effectively carried out its responsibilities hearing appeals on Orders and advising the Minister of Labour on matters concerning the Fire Prevention Act and regulations.

During the year, Council heard 29 appeals of orders of which 15 were upheld; 4 were varied by the Council; 6 were revoked; and 4 were withdrawn. The Council, under the authority vested in it by Section 4 of the Alberta Fire Code may waive compliance with the code or approve alternate fire protection measures. Of the 10 applications under Section 4, four were approved. Five Council decisions were appealed to the Court of Queen's Bench with one of those being appealed through to the Alberta Court of Appeals Supreme Court. The Court of Queen's Bench only found cause in one case to overturn the Council's decision.

Other activities performed by the Council were:

(a) review of proposed amendments to the Alberta Fire Code concentrating on fireworks and tank registration, for tanks used to store combustible or flammable liquids;
(b) the joint ad-hoc committee with the Alberta Building Standards Council completed their review of all current data on residential sprinklering and advised the Minister of Labour of their recommendations;
(c) meeting with the Alberta Building Standards Council to discuss topics of common concern;
(d) meeting with the Assistant Deputy Minister of Labour, General Safety Services Division, to review the organization and operations of the Division.

Tom Makey

Comparative Statistical Summary

for the three years ending March 31, 1987, 1988 and 1989

A. Fire Prevention	1986-87 No.	1987-88 No.	1988-89 No.
Building fire inspections conducted	2,939	2,930	1902
- recommendations issued to correct hazards	10,261	9,608	3804
- orders issued by Branch	47	23	29
Plans examined	208	237	316
Meetings and lectures conducted	1,626	1,307	1003
- attendance	20,390	3,978	6347
Fire Prevention Council Appeal Hearings	69	22	
B. Fire Investigation			
Investigations conducted by Branch	378	379	359
Investigations by other agencies	735	791	880
Total	**1,113**	**1,170**	**1239**
Causes of Fires Investigated			
- arson	826	856	980
- accidental or unknown	283	310	252
- under investigation	4	4	7
Total	**1,113**	**1,170**	**1239**
C. Fire Service Personnel Training	**Attendance**		
Alberta Fire Training School Municipal Training Programs			
Course Title (Duration 44 hrs.) Part I Firefighter	130	132	81
Part II Firefighter	98	96	64
Part III Firefighter	40	43	42
Part IV Firefighter	31	32	21
Part III and IV Practical	—	—	17 **
Part V Firefighter	34	31	30
Part VI Firefighter	21	21	34
Part V and VI Practical	—	—	20 **
Pump Operator "A"	90	88	76
Pump Operator "B"	29	21	14
Fire Prevention for the Firefighter	20	15	10
Vehicle Extrication & Trench Rescue	20	20	19
Dangerous Goods Incident Control	—	31	39
Trench Rescue	—	13	—
Fire Officer C1, Building Construction	16	12	10
Fire Officer C2, Leadership	17	12	16
Fire Officer C3, Pre-emergency Planning	10	11	7
Fire Officer C4, Fire Suppression and Safety	11	12	6
Fire Officer C5, Strategy and Tactics (Theory)	39	34	37
Fire Officer C6, Strategy and Tactics (Practical)	13	10	13
Fire Officer C7, Fire Investigation	18	20	23
Fire Officer C8, Fire Prevention - Fire Protection Equipment	8	9	7
Fire Officer C9, Fire Prevention - Inspection and Public Education	11	7	10
Fire Officer C10, Human Relations and Management	—	17*	17
Fire Officer C11, Dangerous Goods Incident Command	—	—	10 **
Fire Officer C12, Technical Writing Skills	32	13	14
Fire Officer C15, Public Relations and Public Speaking	32	13	12
Fire Inspector DA, Building Codes & Standards	17	24	21
Fire Inspector DB, Alberta Fire Code	21	20	19
Fire Inspector D1, Water Supply	10	5	9
Fire Inspector D2, Standpipe Sprinkler Systems	10	14	11
Fire Services Instructor E1	24	31	28
Fire Services Instructor E2	12	19	17
Fire Services Instructor E3	9	10	9
Total Municipal Fire Department Personnel Attending A.F.T.S.	**823**	**836**	**763**

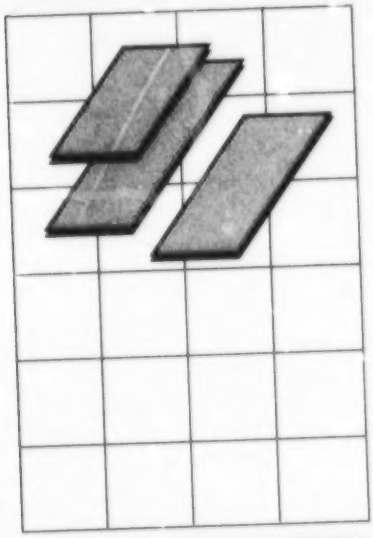
Comparative Statistical Summary (cont'd)
for the three years ending March 31, 1987, 1988 and 1989

	1986-87 No.	1987-88 No.	1988-89 No.
C. Fire Service Personnel Training (Cont.)	**Attendance**		
Extension Courses - Municipal Presentation			
Course Title (Duration 44 hrs.) Part I Firefighter	319	287	317
Part II Firefighter	104	102	130
Pump Operator "A"	42	13	69
Fire Prevention for the Firefighter	32	59	69
Vehicle Extrication	—	25 *	65
Dangerous Goods Incident Control	—	—	47 **
Parts III/IV Firefighter (Theory)	—	—	17 **
Parts V/VI Firefighter (Theory)	—	—	20 **
Fire Officer C1 Building Construction	—	—	50 **
Fire Officer C2, Leadership	44	19	14
Fire Officer C3, Pre-emergency Planning	—	14	38
Fire Officer C4, Suppression	—	—	8 **
Fire Officer C5, Strategy and Tactics (Theory)	19	—	33
Fire Officer C7, Fire Investigation	93	72	42
Fire Officer C8, Fire Protection Equipment	—	22	—
Fire Officer C9, Fire Prevention	9	—	—
Fire Officer C10, Management	—	—	39 **
Fire Officer C12, Technical Writing Skills	32	12	—
Fire Officer C15, Public Relations and Public Speaking	—	36	—
Fire Inspector DA, Building Codes & Standards	—	—	—
Fire Inspector DB, Alberta Fire Code	12	—	—
Fire Inspector D2, Sprinkler & Standpipe Systems	59	12	—
Fire Services Instructor E1	—	11	15
Personnel Attending A.F.T.S. Sponsored Extension and Local Courses	765	684	973
Total Municipal Fire Department Personnel	**1,588**	**1,520**	**1,736**
Industrial Programs			
Course Title (Duration as indicated)			
Part I Industrial Firefighter (16 hrs.)	138	100	129
Part IA Industrial Firefighter (8 hrs.)	104	123	108
Part IB Industrial Firefighter (16 hrs.)	58	85	102
Part II Industrial Firefighter (16 hrs.)	104	81	84
Part III Industrial Firefighter (16 hrs.)	62	75	74
Aircraft Crash/Fire Response (Dry Chemical)	11	—	—
Total Industrial Fire Department Personnel	**477**	**464**	**497**
Grand Total Attendance at A.F.T.S. Sponsored Courses	2,065	1,984	2233
One-day Seminars	45	84	5
Two-day Seminars	21	—	18
Total Seminar Attendance	**66**	**84**	**23**

* These courses were offered for the first time in 1987/88.

** These courses were offered for the first time in 1988/89.

SECTION 1



Alberta Fire Casualties

Fire Commissioner's
Statistical Report

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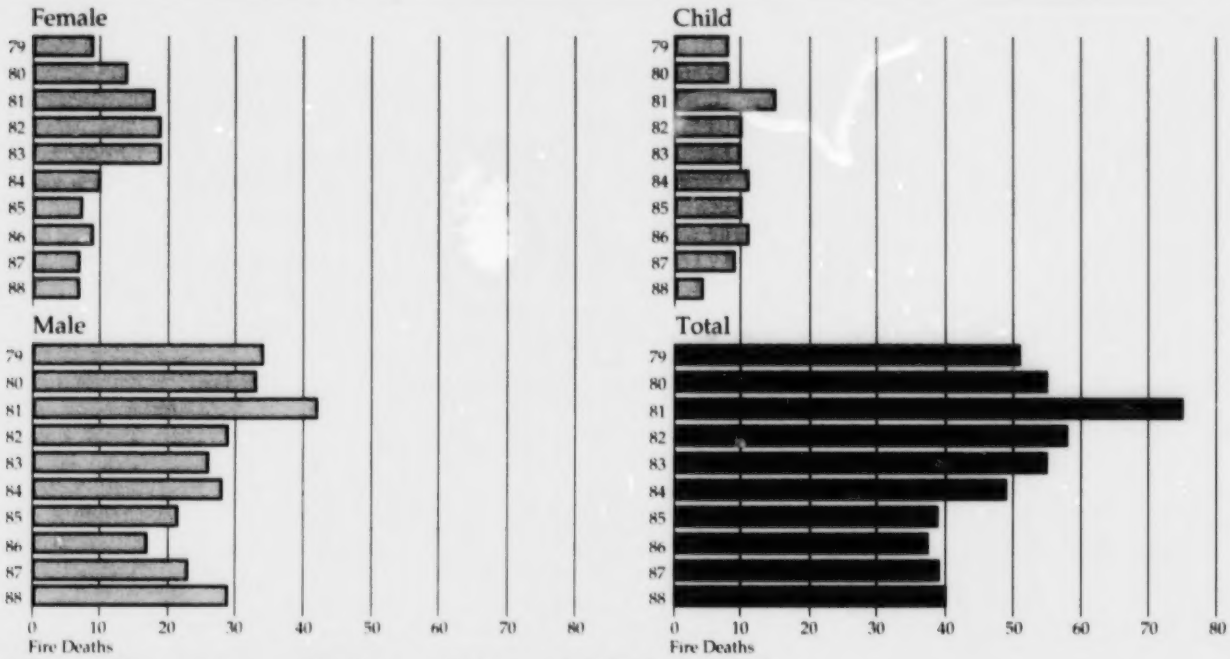
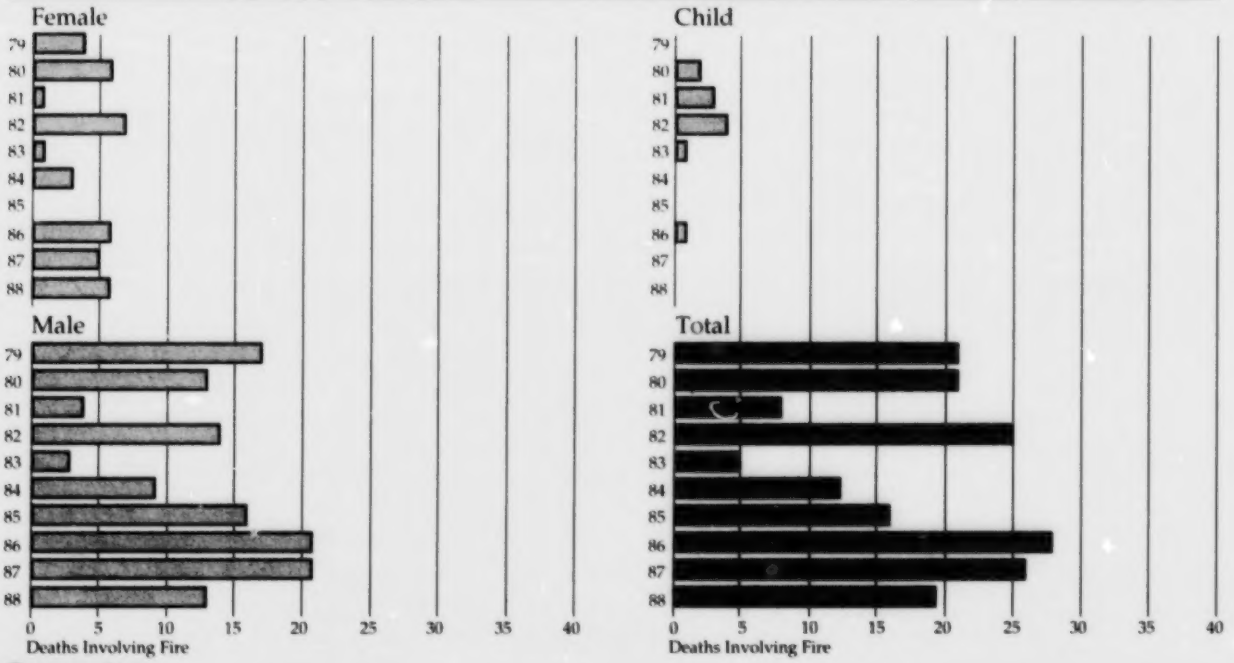
Fire Deaths 1979-1988



Deaths Involving Fire 1979-1988



Commentary

Fire deaths refer to persons who died directly as a result of a fire, either by smoke inhalation or burns. Deaths involving fire refer to persons who were in a place where fire occurred, but who may have died from a cause other than the fire itself (e.g. a person who dies in an automobile accident where the vehicle catches fire prior to death, a suicide by burning or asphyxia, an incendiary fire set for the specific reason of killing).

Fire Deaths by Geographic Location – 1988

• Represents One Death
② Represents Specified Number of Deaths

Death Rates

Year	Population	Fire Deaths	Other Deaths Involving Fire	Total Deaths	Fire Death Rate*	Fire Death Rate*
					Alberta	Canada
1979	2,014,000	51	21	72	2.5	3.1
1980	2,146,000	55	21	76	2.6	3.5
1981	2,278,000	75	8	83	3.3	2.9
1982	2,332,000	58	25	83	2.5	2.7
1983	2,336,000	55	5	60	2.4	2.2
1984	2,346,000	49	13	62	2.1	2.4
1985	2,318,000	39	16	55	1.7	2.2
1986	2,399,000	37	27	64	1.5	2.2
1987	2,402,000	39	26	65	1.6	2.0
1988	2,419,000	40	19	59	1.7	N/A

*Deaths per 100,000 population

Casualties by Age and Sex – 1988

Casualty	Age in Years									
	0-5	6-15	16-25	6-15	36-45	46-55	56-65	Over 65	Unknown	Total
Fire Deaths										
Civilian:										
Male	0	3	6	7	4	1	2	7	2	32
Female	0	1	2	3	1	0	0	1	0	8
Firefighter:										
Male	0	0	0	0	0	0	0	0	0	0
Female	0	0	0	0	0	0	0	0	0	0
Total Deaths	**0**	**4**	**8**	**10**	**5**	**1**	**2**	**8**	**2**	**40**
Injuries										
Civilian:										
Male	11	18	50	44	33	18	16	13	30	233
Female	5	4	16	11	11	5	7	9	9	77
Firefighter:										
Male	0	0	9	37	50	12	0	0	5	113
Female	0	0	1	0	0	0	0	0	1	2
Total Injuries	**16**	**22**	**76**	**92**	**94**	**35**	**23**	**22**	**45**	**425**

Commentary

The greatest number of fire deaths occurred in the 26-35 age category followed by the 16-25 and over 65 age categories. Injuries were greatest in the 36-45 age category followed by the 26-35 age category.

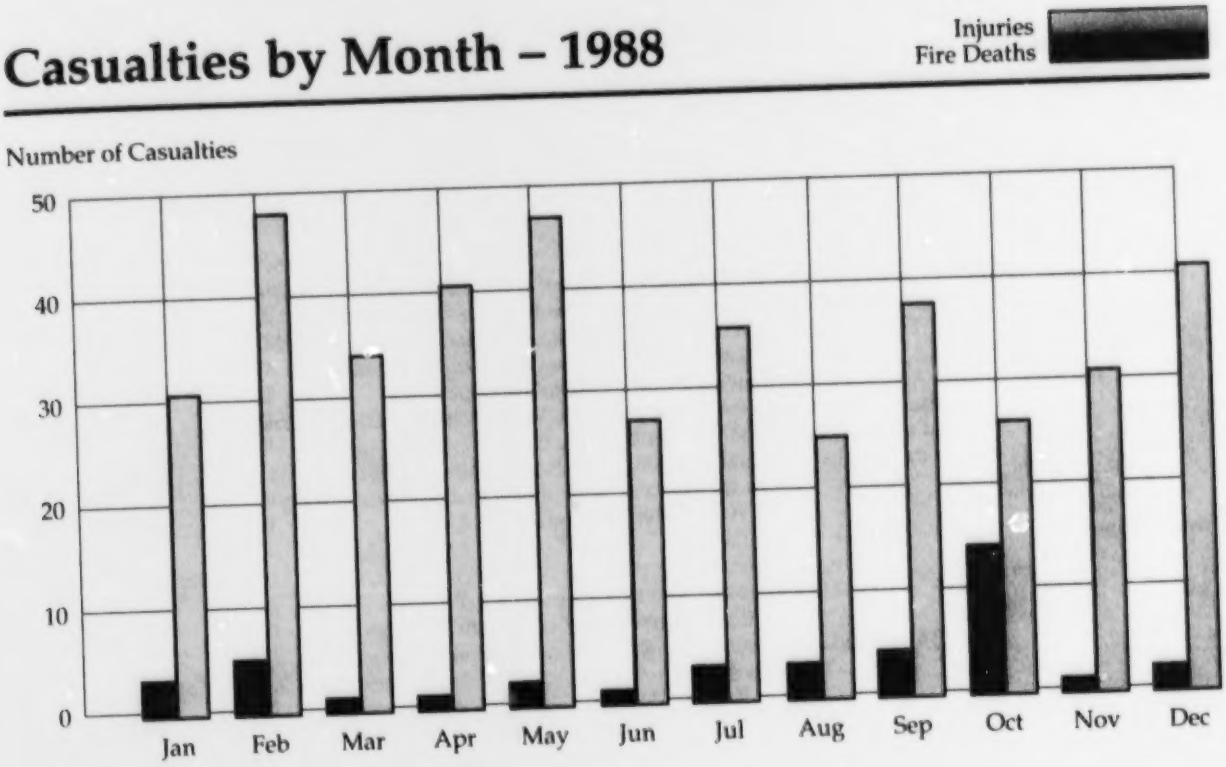
Conditions of Casualties – 1988

Condition of Casualty	Fire Deaths	% Of Total	Injuries	% Of Total
Asleep at time of fire	12	30.0	46	10.8
Bedridden or other physical handicap	1	2.5	2	.5
Impairment by alcohol, drugs or medication	12	30.0	29	6.8
Awake and no physical or mental impairment at the time of fire	4	10.0	280	65.9
Under restraint or detention	0	0	0	0
Too young to react to fire emergency	1	2.5	19	4.5
Mental handicap (senile)	1	2.5	8	1.9
Left unattended (children)	0	0	1	.2
Condition of casualty - unclassified or unknown	9	22.5	40	9.4
Total	**40**	**100.0**	**425**	**100.0**

Commentary

Where the condition of the victim was known in a fatal fire, the victim was usually asleep at the time of fire or impaired by alcohol, drugs or medication. The most common known factor for the injured victim was that he was awake and had no physical or mental impairment at the time of fire.

Casualties by Month – 1988



Commentary
The number of fire deaths per month is highest in the month of December. January recorded the highest number of injuries.

Casualties by Time Period – 1988

Time Period	Fire Deaths	% Of Total	Injuries	% Of Total
6:30 a.m. - 2:29 p.m.	6	15.0	121	28.5
2:30 p.m. - 10:29 p.m.	9	22.5	189	44.5
10:30 p.m. - 6:29 a.m.	25	62.5	110	25.9
Unknown	0	0	5	1.2
Total	**40**	**100.0**	**425**	**100.1**

Commentary
The percentage number of deaths between 10:30 p.m. and 6:29 a.m. was significantly higher than the other two time periods; however, the number of injuries was lower at this time.

Fire Deaths by Major Property Classifications – 1988

Property Classification		Fire Deaths	% Of Total	Deaths Involving Fire	% Of Total
Assembly					
	Theatre, Studio, Auditorium	0	—	0	—
	Amusement, Recreation Place	0	—	0	—
	School, College, University	0	—	0	—
	Church, Funeral Parlour	0	—	0	—
	Clubs, Social, Sport	0	—	0	—
	Museum, Art Gallery, Library	0	—	0	—
	Food or Beverage Establishment	0	—	0	—
	Passenger Terminal, Station	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**0**	—	**0**	—
Institutional					
	Prison, Jail, Reformatory	0	—	0	—
	Home for the Aged	0	—	0	—
	Child Care	0	—	0	—
	Hospital, Sanatorium, Clinic	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**0**	—	**0**	—
Residential					
	One and Two Family Dwellings	17	42.5	1	5.3
	Apartment, Tenement	6	15.0	0	—
	Rooming, Boarding House	0	—	0	—
	Hotel	0	—	0	—
	Motor Hotel	0	—	0	—
	Dormitory	0	—	0	—
	Mobile Home, Trailer	11	27.5	1	5.3
	Miscellaneous	1	2.5	0	—
	Sub-Total	**35**	**87.5**	**2**	**10.5**
Business and Personal Service					
	Office	0	—	0	—
	Personal Service	0	—	0	—
	Electronic Equipment	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**0**	—	**0**	—
Mercantile					
	Food, Beverage Sale	0	—	0	—
	Textile, Wearing Apparel Sale	0	—	0	—
	Furniture, Appliance, Hardware Sales	0	—	0	—
	Books, Newspapers, Drugs, Specialties	0	—	0	—
	Recreation, Hobby Supplies	0	—	0	—
	Repair Shop, Laundry, Dry Cleaner	0	—	0	—
	Motor Vehicles, Boats, Sales and Service	0	—	0	—
	Department, Variety Store	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**0**	—	**0**	—

– Continued on next page –

Fire Deaths by Major Property Classifications – 1988 (cont'd)

Property Classification	Fire Deaths	% Of Total	Deaths Involving Fire	% Of Total
Industrial Manufacturing Properties				
Chemicals, Petroleum, Paints, Plastics	0	—	0	—
Wood, Furniture, Paper, Printing	0	—	0	—
Metal, Metal Products, Electrical				
Equipment and Appliances	0	—	0	—
Food Processing	0	—	0	—
Beverage, Tobacco, Soap, Margarine	0	—	0	—
Textiles	0	—	0	—
Wearing Apparel, Footwear	0	—	0	—
Vehicles and Related Equipment	0	—	0	—
Miscellaneous	0	—	0	—
Sub-Total	**0**	—	**0**	—
Storage Properties				
Agricultural Products	0	—	0	—
Textiles, Fibres, Clothing	0	—	0	—
Processed Food, Beverage	0	—	0	—
Flammable Liquids, Gases, Petroleum Products	0	—	0	—
Wood, Furniture, Paper and Products	0	—	0	—
Chemicals, Plastics, Paints	0	—	0	—
Metal Products, Machinery, Electrical Appliance	0	—	0	—
Vehicle	0	—	0	—
Miscellaneous	0	—	0	—
Sub-Total	**0**	—	**0**	—
Special Property - Transportation Equipment				
Outdoor Property	0	—	0	—
Special Connecting Thoroughfares	0	—	0	—
Under Construction/Demolition: Vacant	0	—	0	—
Watercraft	0	—	0	—
Rail Transport Vehicle and Equipment	4	10.0	14	73.7
Ground Transport Vehicle	0	—	0	—
Aircraft	0	—	0	—
Special Vehicles	0	—	0	—
Other Special Property	0	—	0	—
Sub-Total	**4**	**10.0**	**14**	**73.7**
Miscellaneous Property				
Laboratories	0	—	0	—
Farm Facilities	1	2.5	0	—
Miscellaneous Outbuildings	0	—	0	—
Utility	0	—	0	—
Cement, Glass, Pottery Manufacturing	0	—	0	—
Mining, Quarrying	0	—	2	10.5
Communications	0	—	0	—
Nucleonics	0	—	0	—
Miscellaneous	0	—	1	5.3
Sub-Total	**1**	**2.5**	**3**	**15.8**
Total	**40**	**100.0**	**19**	**100.0**

Commentary
87.5% of fire deaths occurred in residential properties.

Injuries by Major Property Classifications – 1988

Property Classification	Minor Injuries	Light Injuries	Serious Injuries	Total Injuries	% Of Total
Assembly					
Theatre, Studio, Auditorium	0	0	0	0	—
Amusement, Recreation Place	1	0	0	1	.2
School, College, University	5	0	0	5	1.2
Church, Funeral Parlour	7	0	0	7	1.6
Clubs, Social, Sport	0	1	0	1	.2
Museum, Art Gallery, Library	0	0	0	0	—
Food or Beverage Establishment	2	2	0	4	.9
Passenger Terminal, Station	0	0	0	0	—
Miscellaneous	0	0	0	0	—
Sub-Total	**15**	**3**	**0**	**18**	**4.2**
Institutional					
Prison, Jail, Reformatory	0	0	0	0	—
Home for the Aged	0	2	1	3	.7
Child Care	0	0	0	0	—
Hospital, Sanatorium, Clinic	0	1	0	1	.2
Miscellaneous	0	0	0	0	—
Sub-Total	**0**	**3**	**1**	**4**	**.9**
Residential					
One and Two Family Dwellings	68	44	18	130	30.6
Apartment, Tenement	51	22	5	78	18.4
Rooming, Boarding House	1	0	0	1	.2
Hotel	1	1	0	2	.5
Motor Hotel	0	1	0	1	.2
Dormitory	0	2	0	2	.5
Mobile Home, Trailer	14	3	15	32	7.5
Miscellaneous	0	0	0	0	—
Sub-Total	**135**	**73**	**38**	**246**	**57.9**
Business and Personal Service					
Office	0	3	2	5	1.2
Personal Service	0	0	0	0	—
Electronic Equipment	0	0	0	0	—
Miscellaneous	0	0	0	0	—
Sub-Total	**0**	**3**	**2**	**5**	**1.2**
Mercantile					
Food, Beverage Sale	0	0	0	0	—
Textile, Wearing Apparel Sale	0	0	0	0	—
Furniture, Appliance, Hardware Sales	0	0	0	0	—
Books, Newspapers, Drugs, Specialties	1	1	0	2	.5
Recreation, Hobby Supplies	1	0	0	1	.2
Repair Shop, Laundry, Dry Cleaner	1	1	0	2	.5
Motor Vehicles, Boats, Sales and Service	4	1	1	6	1.4
Department, Variety Store	0	0	0	0	—
Miscellaneous	0	3	0	3	.7
Sub-Total	**7**	**6**	**1**	**14**	**3.3**

– Continued on next page –

Injuries by Major Property Classifications – 1988 (cont'd)

Property Classification	Minor Injuries	Light Injuries	Serious Injuries	Total Injuries	% Of Total
Industrial Manufacturing Properties					
Chemicals, Petroleum, Paints, Plastics	6	0	1	7	1.6
Wood, Furniture, Paper, Printing	0	0	0	0	—
Metal, Metal Products, Electrical Equipment and Appliances	1	1	0	2	.5
Food Processing	0	0	0	0	—
Beverage, Tobacco, Soap, Margarine	0	0	0	0	—
Textiles	0	0	0	0	—
Wearing Apparel, Footwear	0	0	0	0	—
Vehicles and Related Equipment	0	0	0	0	—
Miscellaneous	0	0	0	0	—
Sub-Total	**7**	**1**	**1**	**9**	**2.1**
Storage Properties					
Agricultural Products	0	0	0	0	—
Textiles, Fibres, Clothing	0	0	0	0	—
Processed Food, Beverage	0	0	0	0	—
Flammable Liquids, Gases, Petroleum Products	0	1	0	1	.2
Wood, Furniture, Paper and Products	1	0	0	1	.2
Chemicals, Plastics, Paints	0	0	0	0	—
Metal Products, Machinery, Electrical Appliance	1	0	0	1	.2
Vehicle	13	14	3	30	7.1
Miscellaneous	0	2	0	2	.5
Sub-Total	**15**	**17**	**3**	**35**	**8.2**
Special Property – Transportation Equipment					
Outdoor Property	12	8	5	25	5.9
Special Connecting Thoroughfares	0	0	0	0	—
Under Construction/Demolition: Vacant	7	3	0	10	2.4
Watercraft	1	0	0	1	.2
Rail Transport Vehicle and Equipment	0	0	0	0	—
Ground Transport Vehicle	21	17	2	40	9.4
Aircraft	0	0	0	0	—
Special Vehicles	1	3	0	4	.9
Other Special Property	0	0	0	0	—
Sub-Total	**42**	**31**	**7**	**80**	**18.8**
Miscellaneous Property					
Laboratories	0	0	0	0	—
Farm Facilities	5	0	1	6	1.4
Miscellaneous Outbuildings	0	2	0	2	.5
Utility	0	0	0	0	—
Cement, Glass, Pottery Manufacturing	0	0	0	0	—
Mining, Quarrying	2	1	1	4	.9
Communications	0	0	0	0	—
Nucleonics	0	0	0	0	—
Miscellaneous	0	0	2	2	.5
Sub-Total	**7**	**3**	**4**	**14**	**3.3**
Total	**228**	**140**	**57**	**425**	**99.9**

Commentary
58% of injuries occurred in residential properties.

Fire Deaths by Act or Omission – 1988

Act or Omission	Fire Deaths	% Of Total	Deaths Involving Fire	% Of Total
Incendiary				
Arson – for fraudulent purposes	0	—	0	—
Arson – for vengeful/spiteful purposes	0	—	0	—
Arson – for obscuring other crime	0	—	0	—
Arson – to satisfy compulsive desires (pyromania)	0	—	0	—
Suspected Arson	0	—	0	—
Riot, Civil Commotion, Charges Laid	0	—	0	—
Riot, Civil Commotion, No Charges Laid	0	—	0	—
Vandalism, Mischief, Charges Laid	0	—	0	—
Vandalism, Mischief, No Charges Laid	0	—	0	—
Incendiary, Unclassified	1	2.5	2	10.5
Sub-Total	**1**	**2.5**	**2**	**10.5**
Misuse of Source of Ignition				
Smoker's Material	8	20.0	0	—
Thawing	0	—	0	—
Inadequate Control of "Open" Fire	0	—	0	—
Child Playing With	5	12.0	0	—
Welding or Cutting Too Close To	0	—	0	—
Torch Too Close To	0	—	0	—
Misuse of Source of Ignition, Unclassified	0	—	0	—
Sub-Total	**13**	**32.5**	**0**	**—**
Misuse of Material Ignited				
Fuel Spilled Accidentally	0	—	0	—
Improper Fuelling Technique	1	2.5	0	—
Flammable Liquid to Kindle Fire	0	—	0	—
Cleaning, Washing Parts	0	—	0	—
Improper Container	0	—	0	—
Overheated Cooking Oil, Grease, Wax	0	—	0	—
Combustible Placed Too Close to Heat	0	—	0	—
Improper Storage	0	—	0	—
Misuse of Material Ignited, Unclassified	0	—	0	—
Sub-Total	**1**	**2.5**	**0**	**—**
Mechanical, Electrical Failure, Malfunction				
Part Failure, Leak, Break	0	—	0	—
Automatic Control Failure	0	—	0	—
Manual Control Failure	0	—	0	—
Electrical Short Circuit	0	—	0	—
Part Worn Out	0	—	0	—
Mechanical, Electrical Failure, Unclassified	3	7.5	0	—
Sub-Total	**3**	**7.5**	**0**	**—**

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Fire Deaths by Act or Omission – 1988 (cont'd)

Act or Omission	Fire Deaths	% Of Total	Deaths Involving Fire	% Of Total
Construction, Design or Installation Deficiency				
Design Deficiency	0	—	0	—
Construction Deficiency	0	—	0	—
Installed Too Close to Combustible	3	7.5	0	—
Other Installation Deficiency	0	—	0	—
Over Fusing	0	—	0	—
Suspected Faulty Connections/Aluminum Wiring	0	—	0	—
Suspected Faulty Connections/Copper Wiring	0	—	0	—
Construction, Design or Installation Deficiency, Unclassified	0	—	0	—
Sub-Total	**3**	**7.5**	**0**	**—**
Misuse of Equipment				
Overfuelling	1	2.5	0	—
Misuse of Equipment, Unclassified	0	—	0	—
Sub-Total	**1**	**2.5**	**0**	**—**
Human Failing				
Asleep	0	—	0	—
Temporary Loss of Judgement	0	—	2	10.5
Physical or Mental Disability	0	—	1	5.3
Accident	1	2.5	0	—
Suspected Impairment by Alcohol, Drugs, Medication	3	7.5	0	—
Asleep - Suspected Use of Alcohol, Drugs, Medication	3	7.5	0	—
Ignorance of Hazard	0	—	0	—
Distracted, Preoccupied	0	—	0	—
Human Failing, Unclassified	0	—	0	—
Sub-Total	**7**	**17.5**	**3**	**15.8**
Vehicle Accident				
Automobile	0	—	13	68.4
Industrial Truck	0	—	0	—
Other Road Vehicle	0	—	1	5.3
Rail Vehicle	0	—	0	—
Watercraft	0	—	0	—
Aircraft	0	—	0	—
Vehicle Accident, Unclassified	0	—	0	—
Sub-Total	**0**	**—**	**14**	**73.7**
Miscellaneous				
Miscellaneous, Unclassified	0	—	0	—
Act or Omission - Cannot be Determined	11	27.5	0	—
Sub-Total	**11**	**27.5**	**0**	**—**
Total	**40**	**100.0**	**19**	**100.0**

Commentary

Misuse of smoker's material was the leading cause of fatal fires followed by child playing with a source of ignition.

Injuries by Act or Omission – 1988

Act or Omission	Minor Injuries	Light Injuries	Serious Injuries	Total Injuries	% Of Total
Incendiary					
Arson – for fraudulent purposes	0	0	0	0	—
Arson – for vengeful/spiteful purposes	0	1	0	1	.2
Arson – for obscuring other crime	1	0	0	1	.2
Arson – to satisfy compulsive desires (pyromania)	0	0	0	0	—
Suspected Arson	9	4	0	13	3.1
Riot, Civil Commotion, Charges Laid	0	0	0	0	—
Riot, Civil Commotion, No Charges Laid	0	0	0	0	—
Vandalism, Mischief, Charges Laid	0	2	0	2	.5
Vandalism, Mischief, No Charges Laid	8	1	0	9	2.1
Incendiary, Unclassified	7	4	3	14	3.3
Sub-Total	**25**	**12**	**3**	**40**	**9.4**
Misuse of Source of Ignition					
Smoker's Material	20	10	2	32	7.5
Thawing	1	0	0	1	.2
Inadequate Control of "Open" Fire	5	5	1	11	2.6
Child Playing With	25	14	4	43	10.1
Welding or Cutting Too Close To	1	1	0	2	.5
Torch Too Close To	1	1	0	2	.5
Misuse of Source of Ignition, Unclassified	1	0	1	2	.5
Sub-Total	**54**	**31**	**8**	**93**	**21.9**
Misuse of Material Ignited					
Fuel Spilled Accidentally	6	5	0	11	2.6
Improper Fuelling Technique	0	2	0	2	.5
Flammable Liquid to Kindle Fire	1	2	1	4	.9
Cleaning, Washing Parts	5	7	0	12	2.8
Improper Container	0	0	0	0	—
Overheated Cooking Oil, Grease, Wax	26	11	3	40	9.4
Combustible Placed Too Close to Heat	4	1	0	5	1.2
Improper Storage	1	3	1	5	1.2
Misuse of Material Ignited, Unclassified	1	0	0	1	.2
Sub-Total	**44**	**31**	**5**	**80**	**18.8**
Mechanical, Electrical Failure, Malfunction					
Part Failure, Leak, Break	18	8	2	28	6.6
Automatic Control Failure	4	2	0	6	1.4
Manual Control Failure	0	0	2	2	.5
Electrical Short Circuit	7	10	1	18	4.2
Part Worn Out	0	1	0	1	.2
Mechanical, Electrical Failure, Unclassified	7	2	7	16	3.8
Sub-Total	**36**	**23**	**12**	**71**	**16.7**
Construction, Design or Installation Deficiency					
Design Deficiency	0	0	0	0	—
Construction Deficiency	3	0	0	3	.7
Installed Too Close to Combustible	0	1	2	3	.7
Other Installation Deficiency	0	0	0	0	—
Over Fusing	0	0	0	0	—
Suspected Faulty Connections/Aluminum Wiring	0	0	0	0	—
Suspected Faulty Connections/Copper Wiring	1	0	0	1	.2
Construction, Design or Installation Deficiency, Unclassified	1	2	0	3	.7
Sub-Total	**5**	**3**	**2**	**10**	**2.4**

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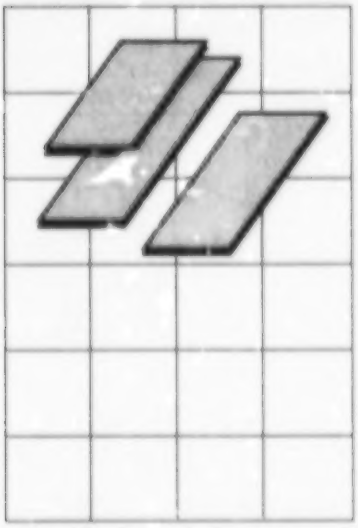
Injuries
by Act or Omission – 1988 (cont'd)

Act or Omission	Minor Injuries	Light Injuries	Serious Injuries	Total Injuries	% Of Total
Misuse of Equipment					
Overfuelling	1	0	0	1	.2
Misuse of Equipment, Unclassified	0	0	0	0	—
Sub-Total	**1**	**0**	**0**	**1**	**.2**
Human Failing					
Asleep	7	5	0	12	2.8
Temporary Loss of Judgement	0	0	0	0	—
Physical or Mental Disability	0	1	2	3	.7
Accident	5	0	1	6	1.4
Suspected Impairment by Alcohol, Drugs, Medication	4	5	0	9	2.1
Asleep – Suspected Use of Alcohol, Drugs, Medication	6	5	3	14	3.3
Ignorance of Hazard	14	8	14	36	8.5
Distracted, Preoccupied	8	1	0	9	2.1
Human Failing, Unclassified	1	0	0	1	.2
Sub-Total	**25**	**25**	**20**	**90**	**21.2**
Vehicle Accident					
Automobile	3	0	1	4	.9
Industrial Truck	0	0	0	0	—
Other Road Vehicle	0	2	0	2	.5
Rail Vehicle	0	0	0	0	—
Watercraft	0	0	0	0	—
Aircraft	0	0	0	0	—
Vehicle Accident, Unclassified	0	0	0	0	—
Sub-Total	**3**	**2**	**1**	**6**	**1.4**
Miscellaneous					
Miscellaneous, Unclassified	0	3	0	3	.7
Act or Omission – Cannot be Determined	15	10	6	31	7.3
Sub-Total	**15**	**13**	**6**	**34**	**8.0**
Total	**228**	**140**	**57**	**425**	**100.0**

Commentary

Child playing with a source of ignition was the leading cause of fires where injuries occurred, followed by overheated cooking oil.

SECTION 2



Alberta Fire Loss Information

Fire Commissioner's
Statistical Report

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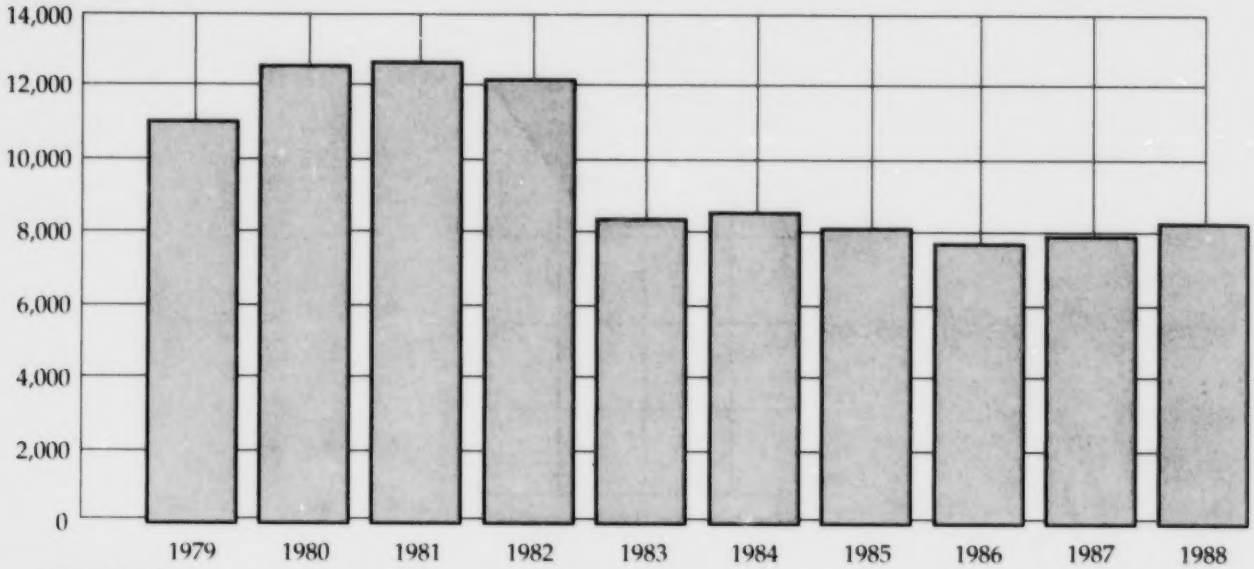
Fires and Losses 1979-1988

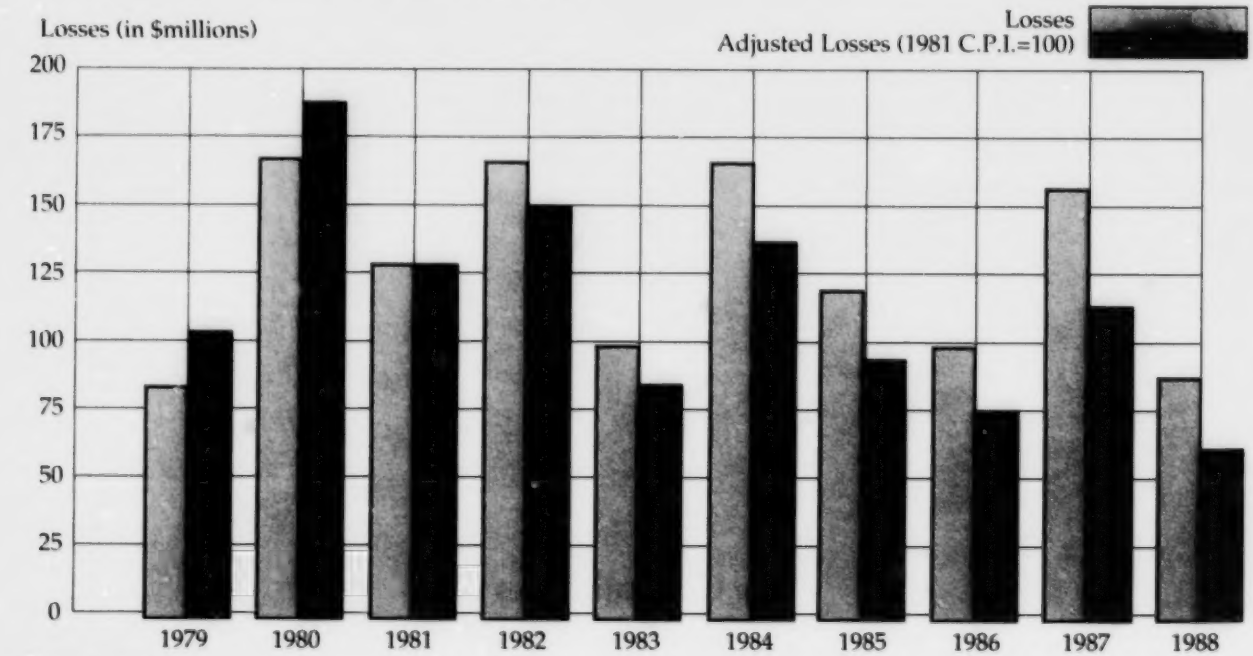
Number of Fires



Commentary

The number of fires has decreased by 25.8% from 1979 to 1988. Grass fires were not included in 1983-88 as they were in previous years. If they had been included, fires in 1983 would have been 10,280, in 1984 would have been 10,174, in 1985 would have been 9,360, in 1986 would have been 8,722, in 1987 would have been 9,350 and 1988 would have been 10,034.

Losses (in $millions)



Commentary

Losses have increased 6% between 1979 and 1988 and adjusted losses have decreased 40%

Fire Rates and Per Capita Losses 1979-1988

Year	Population*	Number Of Fires	Fire Rate**	Loss Estimate	Loss Per Capita
1979	2,085,000	11,161	5.4	82,054,070	39.35
1980	2,180,000	12,563	5.8	167,349,508	76.77
1981	2,267,000	12,659	5.6	128,600,499	56.73
1982	2,345,000	12,191	5.2	166,471,418	70.99
1983	2,366,000	8,483 ***	3.6	98,720,725	41.72
1984	2,358,000	8,549 ***	3.6	167,449,997	71.01
1985	2,338,000	8,148 ***	3.5	117,685,509	50.34
1986	2,372,000	7,773 ***	3.3	99,996,272	42.16
1987	2,380,000	7,999 ***	3.4	156,833,201	65.90
1988	2,397,000	8,278 ***	3.4	87,353,207	36.44
Average (1979-1988)		9,780		127,251,440	

* As published by Alberta Quarterly Growth, 4th Quarterly, Alberta Bureau of Statistics

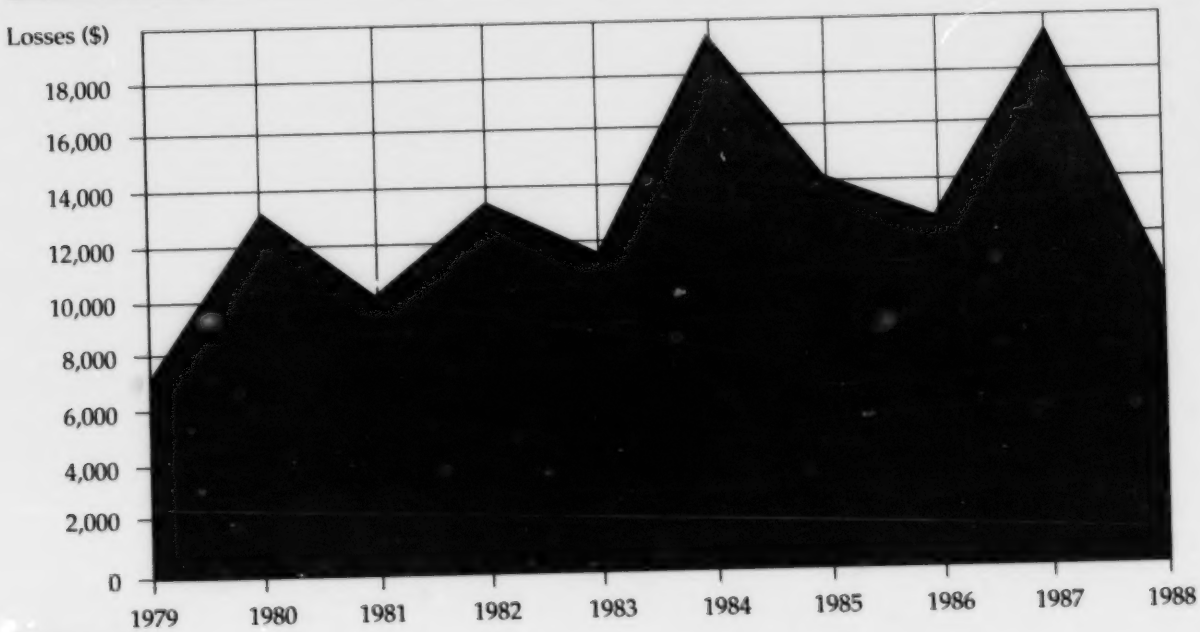
** Number of fires per 1,000 population

*** These numbers do not include 1,797 grass fires where no losses occurred in 1983, 1,625 grass fires in 1984, 1,212 grass fires in 1985, 949 grass fires in 1986, 1,351 grass fires in 1987 and 1,756 grass fires in 1988.

Commentary

From 1979 to 1988, Alberta's population increased 13%, the number of fires decreased by 26%, the loss estimate increased 6%, and the loss per capita decreased 7%. Between 1987 and 1988 the number of fires increased by 3.4% and the losses decreased by 44%. 32% of the decrease was due to one fire within 1987 with an estimated loss of $50,000,000.

Average Loss Per Fire 1979-1988



Commentary

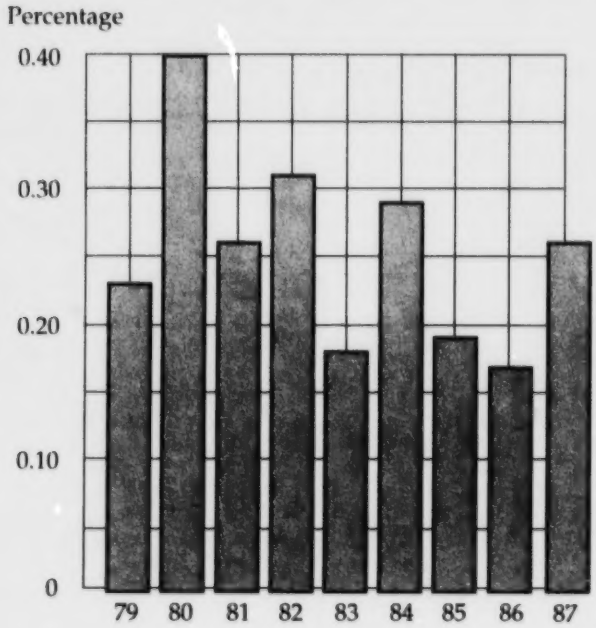
The average loss per fire increased by 30% from 1979 to 1988.

Fire Losses Related to Economic Indices 1979-1988

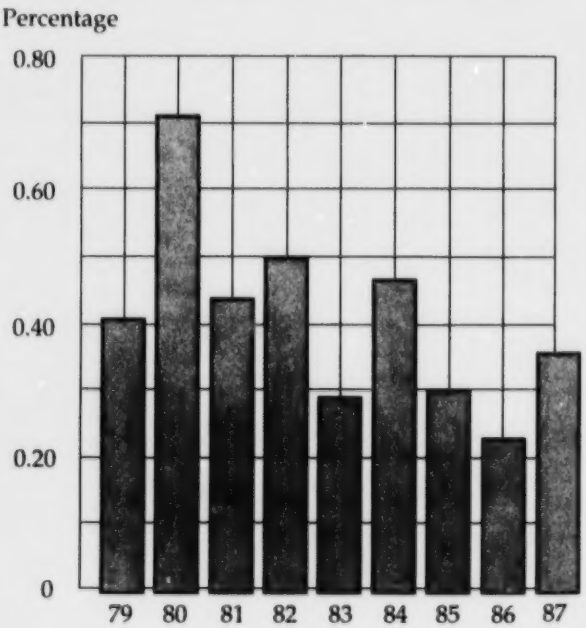
Year	Fire Losses (in $ Millions)	Gross Domestic Product		Personal Income	
		Gross Domestic Product* (in $ Millions)	% Of Gross Domestic Product	Personal Income* (in $ Millions)	% Of Personal Income
1979	82.0	35,045	.23	19,865	.41
1980	167.3	42,021	.40	23,658	.70
1981	128.6	49,037	.26	29,170	.44
1982	166.4	52,838	.31	33,054	.50
1983	98.7	54,812	.18	34,442	.29
1984	167.4	57,458	.29	35,840	.47
1985	117.6	62,009	.19	38,762	.30
1986	99.9	56,439	.17	42,366	.23
1987	156.8	58,940	.26	42,753	.36
1988	87.3	N/A	—	N/A	—

* Alberta Economic Accounts, 1987

Fire Losses As A Percentage of Gross Domestic Product

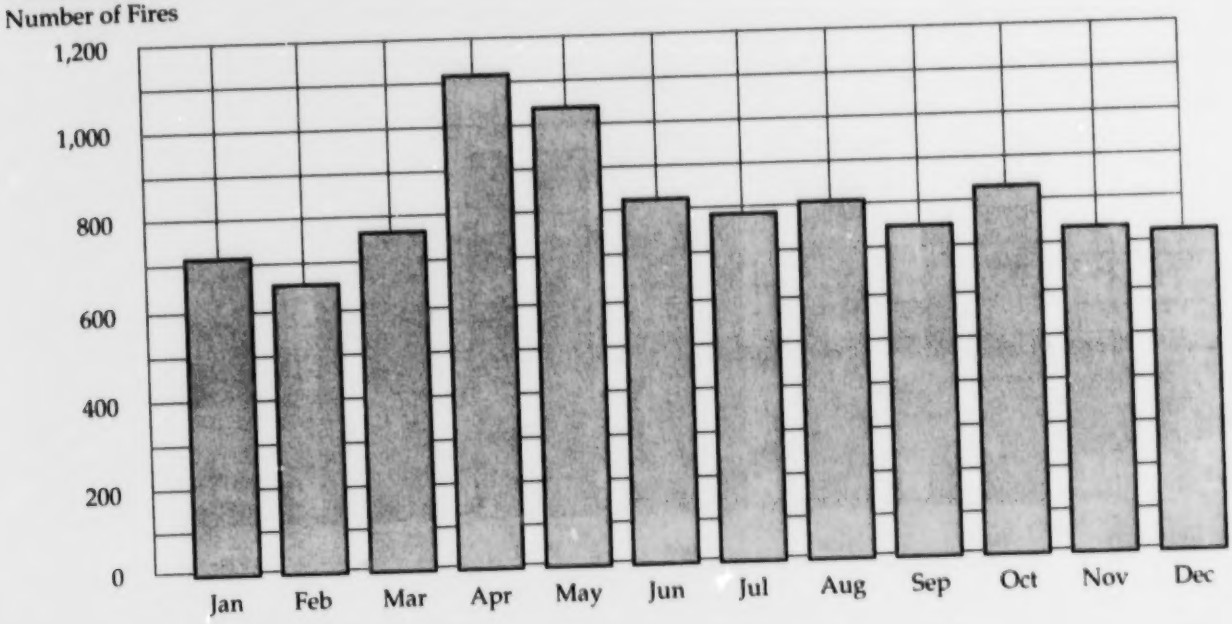


Fire Losses As A Percentage of Personal Income

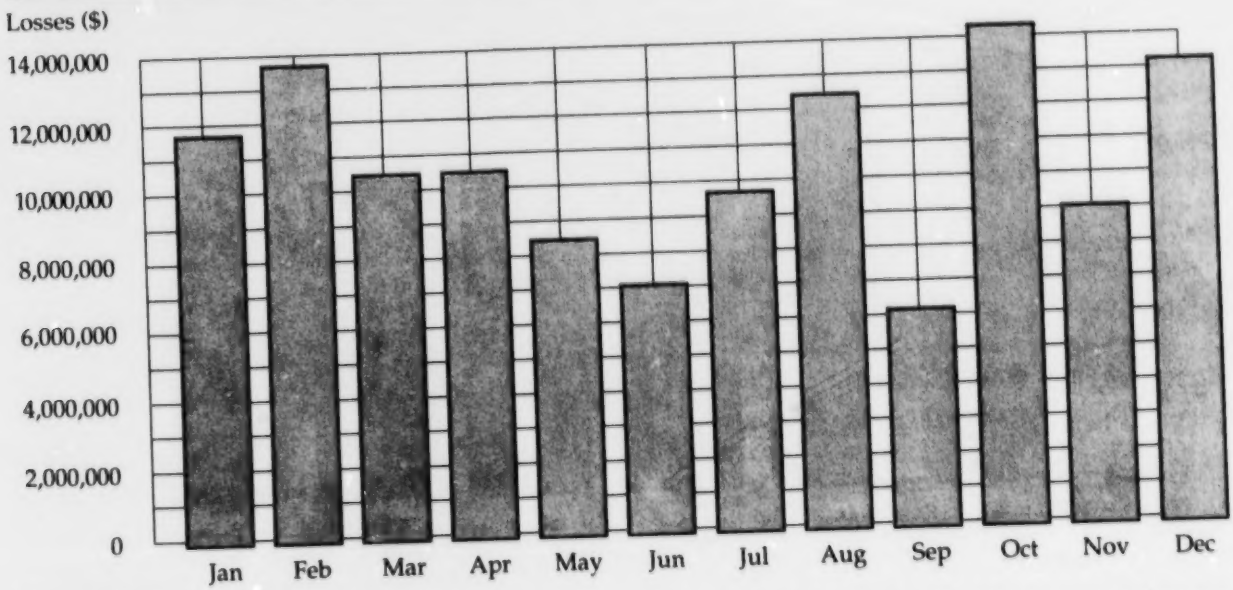


Commentary
As a percentage of gross domestic product, fire losses have increased 12% between 1979 and 1987. As a percentage of personal income, fire losses decreased 12% during the same time period.

Average Number of Fires by Month 1979-1988

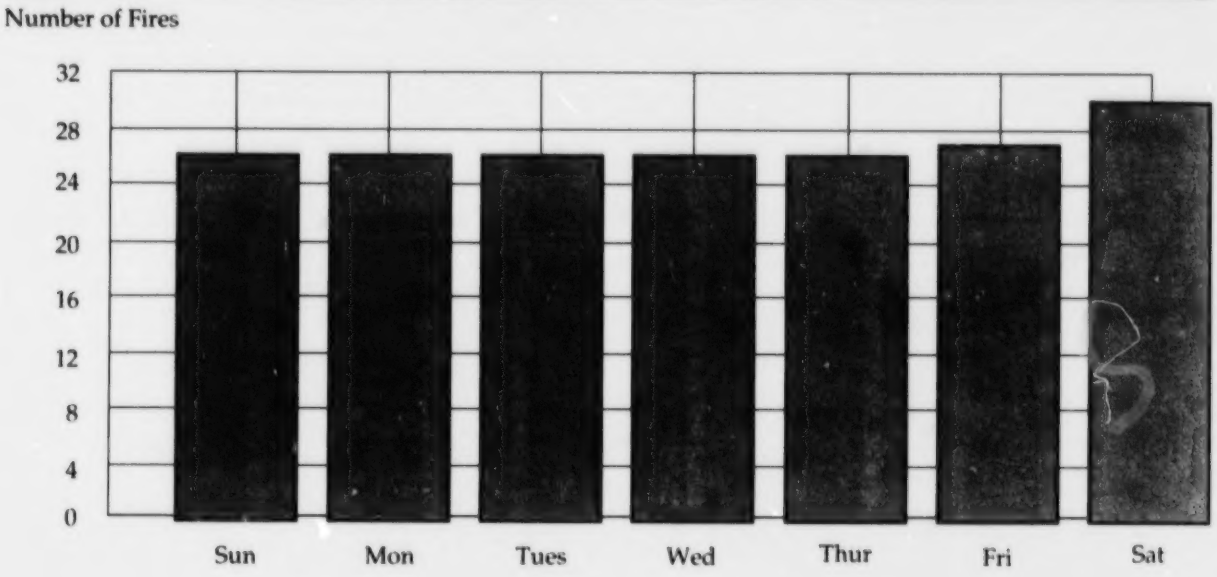


Average Fire Loss by Month 1979-1988

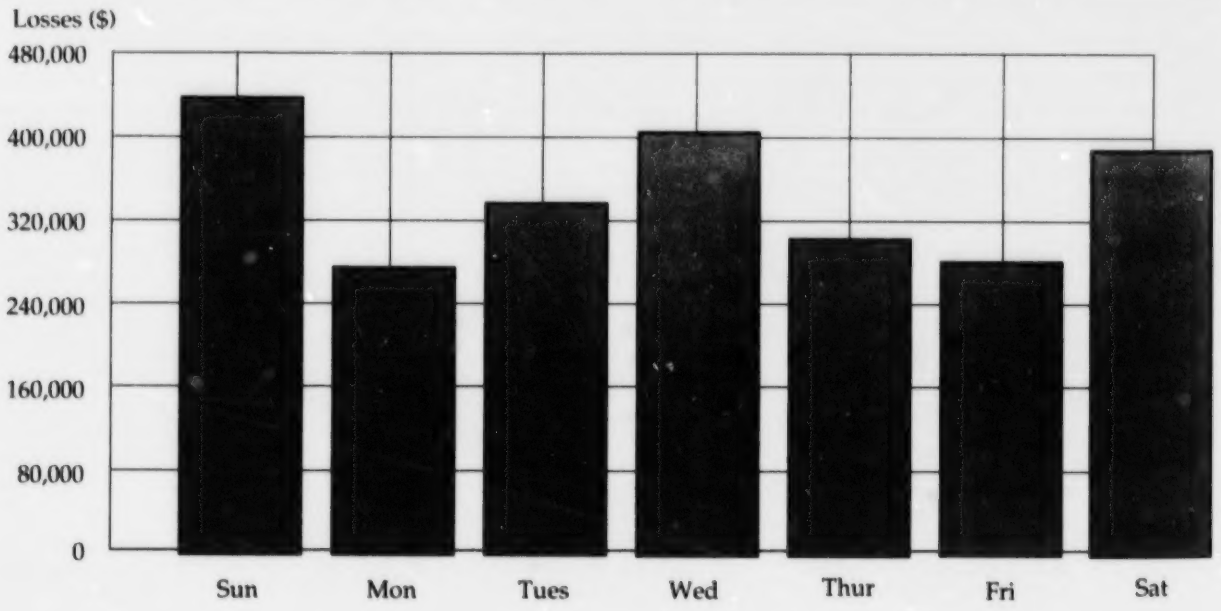


Commentary
While the average number of fires was greatest in the months of April and May, average losses were highest in October and February. The highest average loss per fire per month ($20,725) was in February.

Average Number of Fires by Day of Week 1979-1988

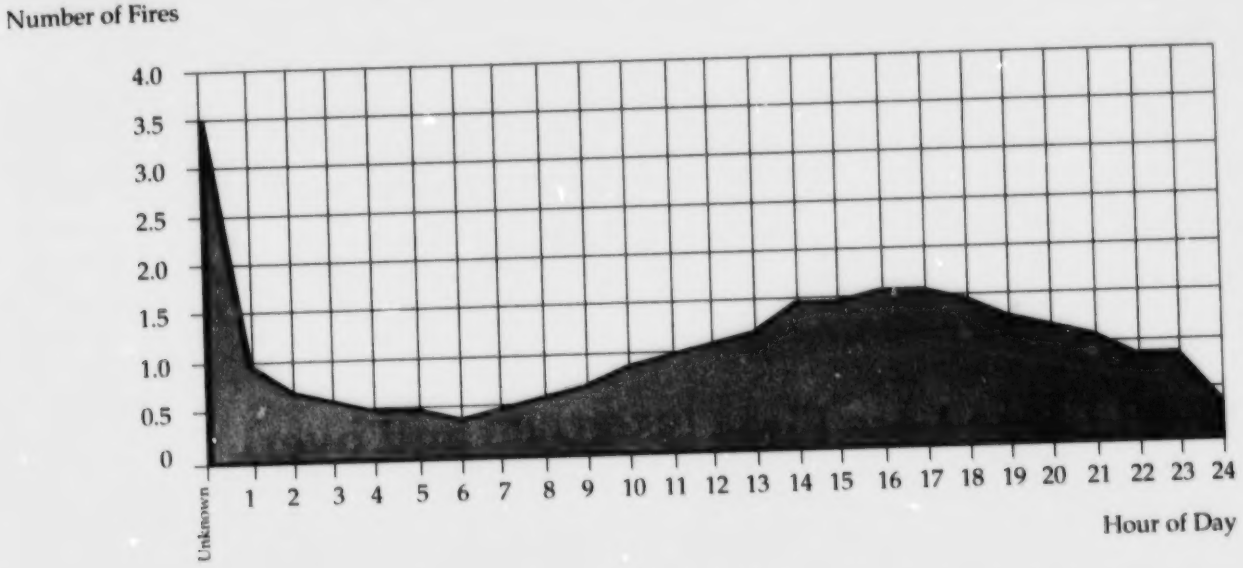


Average Fire Loss by Day of Week 1979-1988

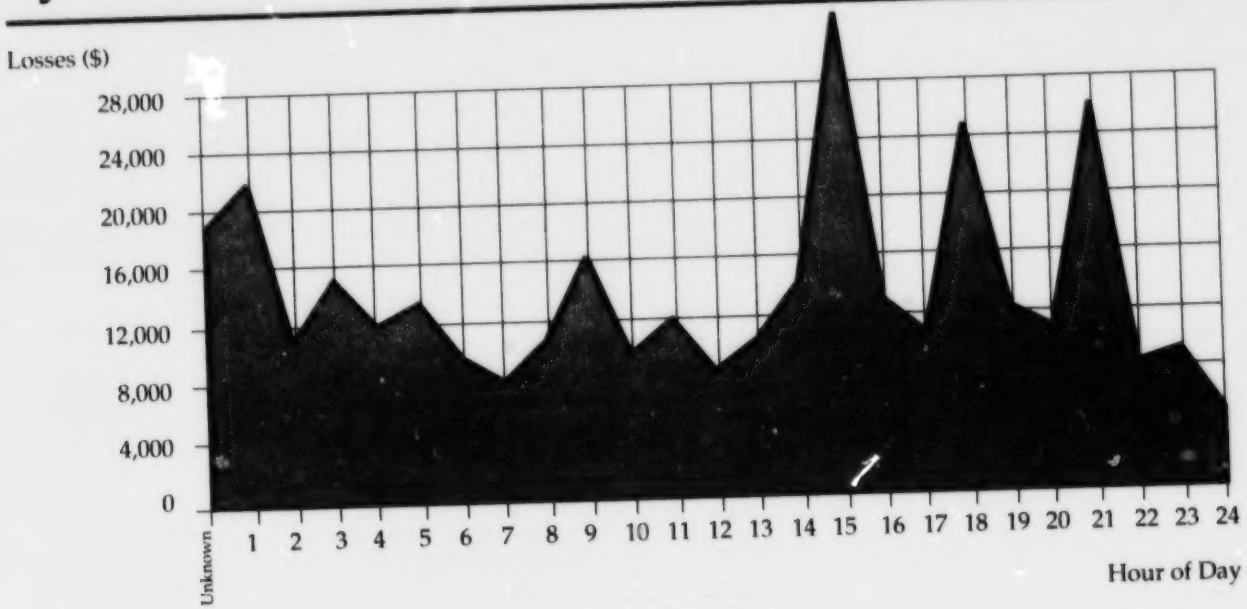


Commentary
From 1979 to 1988, the highest average number of fires on any day of the week occurred on Saturday. Sunday had higher losses than others, with Monday having the lowest losses.

Average Number of Fires by Hour of Day 1979-1988



Average Fire Loss by Hour of Day 1979-1988



Commentary
While the greatest number of fires occurred between the hours of 1400 (2:00 p.m.) and 1800 (6:00 p.m.), the greatest losses generally occurred at 1500 (3:00 p.m.) and 2100 (9:00 p.m.).

Fires by Loss Category – 1988

Loss Category	Number	Losses	Percentage Number	Percentage Losses
$1 - 99	1,451	35,141	17.5	Less than .1
100 - 999	2,389	969,761	28.9	1.1
1,000 - 9,999	3,108	9,745,870	37.5	11.2
10,000 - 49,999	981	21,398,981	11.9	24.5
50,000 - 249,999	300	27,820,985	3.6	31.8
250,000 - 499,999	34	10,517,058	.4	12.0
500,000 and over	15	16,865,411	.2	19.3
Total	**8,278**	**87,353,207**	**100.0**	**100.0**

Commentary
Just over one per cent of the fires caused 46.4% of the 1988 losses.

1988 Large Loss Fires ($500,000 and over)

Property Class	Date	Location	Occupancy	Act or Omission	Losses	Deaths	Injuries
Assembly	Jan. 13	Manning	Arena	Unknown	1,861,033		
	Nov. 26	Calmar	Arena	Unknown	670,000		
	June 26	Calgary	Elementary school	Incendiary	1,500,400	—	2
	Apr. 21	Lac La Biche	Historical building	Unknown	1,000,000		
Residential	May 20	Edmonton	Apartment	Unknown	694,127		
Mercantile	Apr. 5	Claresholm	Supermarket	Mech. Elect. Malfcn.	667,371		
	Mar. 17	Edmonton	Variety Store	Incendiary	712,000		
Industrial Manufacturing	Sept. 17	I.D. #18	Petroleum Refinery	Part Failure	500,000	—	1
Storage	Dec. 25	Edmonton	Metal Product	Unknown	977,200		
	Feb. 6	Slave Lake	Heavy Machinery & Equipment	Part Failure	501,500		
Special	Oct. 11	Indian Res.	Bridge	Uncontrolled Open Fire	500,000		
	Aug. 11	McLennan	Vacant building	Incendiary	500,000		
	Oct. 31	Cty #16	Train	Vehicle Accident	1,000,000		
	Dec. 4	I.D. #14	Helicopter	Vehicle Accident	4,000,000		
Miscellaneous	July 25	Cty #23	Animal barn	Unknown	1,781,780	—	1

Commentary
In comparison with 1987 large loss fires, 1988 large loss fires decreased by 55% and the dollar losses decreased by 82%.

Fires by Major Property Classifications – 1988

Property Classification		Number Of Fires	% Of Total	Losses	% Of Total
Assembly					
	Theatre, Studio, Auditorium	1	—	100	—
	Amusement, Recreation Place	20	.2	2,822,287	3.2
	School, College, University	58	.7	1,833,460	2.1
	Church, Funeral Parlour	11	.1	368,220	.4
	Clubs, Social, Sport	11	.1	255,136	.3
	Museum, Art Gallery, Library	1	—	1,000,000	1.1
	Food or Beverage Establishment	91	1.1	1,373,480	1.6
	Passenger Terminal, Station	3	—	111	—
	Miscellaneous	0	—	0	—
	Sub-Total	**196**	**2.4**	**7,652,794**	**8.8**
Institutional					
	Prison, Jail, Reformatory	8	.1	13,226	—
	Home for the Aged	18	.2	5,890	—
	Child Care	2	—	35,100	—
	Hospital, Sanatorium, Clinic	17	.2	195,727	.2
	Miscellaneous	0	—	0	—
	Sub-Total	**45**	**.5**	**249,943**	**.3**
Residential					
	One and Two Family Dwellings	1,503	18.2	20,305,169	23.2
	Apartment, Tenement	493	6.0	3,351,764	3.8
	Rooming, Boarding House	12	.1	57,659	.1
	Hotel	34	.4	101,381	.1
	Motor Hotel	16	.2	117,443	.1
	Dormitory	12	.1	162,245	.2
	Mobile Home, Trailer	289	3.5	4,441,269	5.1
	Miscellaneous	8	.1	26,974	—
	Sub-Total	**2,367**	**28.6**	**28,563,904**	**32.7**
Business and Personal Service					
	Office	49	.6	1,299,006	1.5
	Personal Service	5	.1	181,550	.2
	Electronic Equipment	0	—	0	—
	Miscellaneous	0	—	0	—
	Sub-Total	**54**	**.7**	**1,480,556**	**1.7**
Mercantile					
	Food, Beverage Sale	17	.2	1,385,965	1.6
	Textile, Wearing Apparel Sale	6	.1	140,882	.1
	Furniture, Appliance, Hardware Sales	10	.1	426,719	.5
	Books, Newspapers, Drugs, Specialties	20	.2	284,122	.3
	Recreation, Hobby Supplies	4	—	67,700	.1
	Repair Shop, Laundry, Dry Cleaner	18	.2	342,607	.4
	Motor Vehicles, Boats, Sales and Service	46	.6	1,081,437	1.2
	Department, Variety Store	21	.3	1,016,886	1.2
	Miscellaneous	8	.1	744,031	.9
	Sub-Total	**150**	**1.8**	**5,490,349**	**6.3**

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Fires by Major Property Classifications – 1988 (cont'd)

Property Classification	Number Of Fires	% Of Total	Losses	% Of Total
Industrial Manufacturing Properties				
Chemicals, Petroleum, Paints, Plastics	30	.4	2,042,184	2.3
Wood, Furniture, Paper, Printing	29	.4	894,595	1.0
Metal, Metal Products, Electrical Equipment and Appliances	46	.6	1,535,066	1.8
Food Processing	15	.2	102,379	.1
Beverage, Tobacco, Soap, Margarine	4	—	73,000	.1
Textiles	0	—	0	—
Wearing Apparel, Footwear	1	—	100	—
Vehicles and Related Equipment	2	—	463,835	.5
Miscellaneous	7	.1	55,701	.1
Sub-Total	**134**	**1.6**	**5,166,860**	**5.9**
Storage Properties				
Agricultural Products	23	.3	845,421	1.0
Textiles, Fibres, Clothing	0	—	0	—
Processed Food, Beverage	2	—	177,200	.2
Flammable Liquids, Gases, Petroleum Products	18	.2	417,674	.5
Wood, Furniture, Paper and Products	33	.4	45,161	.1
Chemicals, Plastics, Paints	8	.1	332,943	.4
Metal Products, Machinery, Electrical Appliance	23	.3	1,073,836	1.2
Vehicle	260	3.1	3,111,900	3.6
Miscellaneous	18	.2	453,699	.5
Sub-Total	**385**	**4.7**	**6,457,834**	**7.4**
Special Property — Transportation Equipment				
Outdoor Property	1,217	14.7	296,111	.3
Special Connecting Thoroughfares	7	.1	551,501	.6
Under Construction or Demolition: Vacant	181	2.2	2,684,844	3.1
Watercraft	20	.2	84,868	.1
Rail Transport Vehicle and Equipment	14	.2	1,043,350	1.2
Ground Transport Vehicle	2,369	28.6	8,404,675	9.6
Aircraft	5	.1	4,027,169	4.6
Special Vehicles	296	3.6	6,490,014	7.4
Other Special Property	0	—	0	—
Sub-Total	**4,109**	**49.6**	**23,582,532**	**27.0**
Miscellaneous Property				
Laboratories	7	.1	42,333	—
Farm Facilities	415	5.0	5,839,061	6.7
Miscellaneous Outbuildings	262	3.2	1,182,974	1.4
Utility	97	1.2	467,060	.5
Cement, Glass, Pottery Manufacturing	5	.1	29,000	—
Mining, Quarrying	21	.3	1,041,529	1.2
Communications	7	.1	53,800	.1
Nucleonics	0	—	0	—
Miscellaneous	24	.3	52,678	.1
Sub-Total	**838**	**10.1**	**8,708,435**	**10.0**
Total	**8,278**	**100.0**	**87,353,207**	**100.1**

Commentary
While the number of fires was greatest in the 'special' classification (notably vehicles) with 50%, losses were greatest in residential properties with 33%.

Property Losses Related to Area of Origin – 1988

Property Classification	Means of Egress		Assembly Area		Function Area		Storage Area	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	15	1,019,849	20	2,075,843	85	2,647,180	10	196,275
Institutional	2	35,010	5	430	29	71,252	1	300
Residential	71	704,634	275	3,837,565	1,253	10,393,017	74	1,800,866
Business	5	24,060	2	25,010	18	1,037,700	11	347,025
Mercantile	5	2,183	11	462,898	24	882,798	24	1,827,084
Manufacturing	1	9,500	1	18,000	38	1,621,737	17	1,048,948
Storage	3	228,748	1	141,072	4	54,436	139	1,559,533
Special	8	16,930	6	128,678	28	230,597	24	1,405,799
Miscellaneous	1	100	0	0	510	796,831	111	3,400,121
Total	**111**	**2,041,014**	**321**	**6,689,496**	**1,530**	**17,735,476**	**411**	**11,585,951**

Property Classification	Service Facilities		Service and Equipment Area		Structural Area		Vehicle Area	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	7	39,979	12	320,176	40	1,352,112	0	0
Institutional	0	0	5	140,950	3	2,001	0	0
Residential	65	118,339	90	1,691,350	369	6,650,118	28	256,672
Business	0	0	8	29,511	10	17,250	0	0
Mercantile	2	5,500	41	1,337,364	33	582,854	2	5,200
Manufacturing	2	2,800	41	1,708,321	22	111,410	0	0
Storage	1	2,000	14	782,156	113	1,508,236	19	238,313
Special	1	100	7	173,193	74	280,938	2,692	19,678,988
Miscellaneous	1	1,500	38	1,340,423	343	1,799,421	23	78,130
Total	**79**	**170,218**	**256**	**7,523,444**	**1,007**	**12,304,340**	**2,764**	**20,257,303**

Property Classification	Outside Area		Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	5	1,351	2	101	196	7,652,794
Institutional	0	0	0	0	45	249,943
Residential	53	383,236	89	2,728,107	2,367	28,563,904
Business	0	0	0	0	54	1,480,556
Mercantile	6	28,018	2	356,450	150	5,490,349
Manufacturing	6	219,501	6	426,643	134	5,166,860
Storage	80	583,544	11	1,359,796	385	6,457,834
Special	1,227	1,009,541	42	657,768	4,109	23,582,532
Miscellaneous	226	734,225	44	557,684	838	8,708,435
Total	**1,603**	**2,959,416**	**196**	**6,086,549**	**8,278**	**87,353,207**

Commentary

For all types of occupancies, fires starting in service and equipment areas caused an average $29,388 loss. The next highest average loss, $28,189, occurred when fires started in storage areas.

Property Losses Related to Act or Omission – 1988

Property Classification	Incendiary Fires		Misuse Of Source		Misuse Of Material		Mechanical, Electrical Failure	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	72	2,849,623	20	174,731	27	398,237	34	550,932
Institutional	12	69,271	6	1,561	2	51	9	166,133
Residential	206	2,422,217	479	5,547,032	479	3,468,126	368	5,280,326
Business	18	421,249	7	75,200	5	144,001	17	638,496
Mercantile	33	1,914,833	27	161,015	13	359,441	42	1,462,901
Manufacturing	4	744,834	28	1,100,355	11	275,830	41	1,379,386
Storage	107	1,209,446	70	804,557	38	346,121	54	1,258,306
Special	595	2,585,992	798	1,524,771	115	334,729	1,554	7,057,249
Miscellaneous	99	547,206	316	1,728,510	37	339,438	108	1,397,441
Total	**1,146**	**12,764,671**	**1,751**	**11,117,732**	**727**	**5,665,974**	**2,227**	**19,191,170**

Property Classification	Design Deficiency		Misuse Of Equipment		Human Failing		Vehicle Accident	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	7	6,650	0	0	19	53,051	0	0
Institutional	2	2,000	0	0	11	5,482	0	0
Residential	77	1,324,860	5	7,542	507	2,930,740	1	4,000
Business	0	0	0	0	1	25,400	1	1,200
Mercantile	3	187,815	1	6,000	13	82,044	0	0
Manufacturing	5	400,500	1	100,000	19	521,778	0	0
Storage	7	303,495	2	13,000	31	179,698	0	0
Special	24	51,918	7	50,884	107	845,931	101	6,449,311
Miscellaneous	7	17,379	0	0	23	311,871	3	7,000
Total	**132**	**2,294,617**	**16**	**177,426**	**731**	**4,955,995**	**106**	**6,461,511**

Property Classification	Miscellaneous		Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	1	6,490	16	3,613,080	196	7,652,794
Institutional	3	5,445	0	0	45	249,943
Residential	32	283,037	213	7,296,024	2,367	28,563,904
Business	2	35,010	3	140,000	54	1,480,556
Mercantile	5	18,470	13	1,297,830	150	5,490,349
Manufacturing	10	177,511	15	466,666	134	5,166,860
Storage	14	176,367	62	2,166,844	385	6,457,834
Special	101	681,754	707	3,999,993	4,109	23,582,532
Miscellaneous	69	356,864	176	4,002,726	838	8,708,435
Total	**237**	**1,740,948**	**1,205**	**22,983,163**	**8,278**	**87,353,207**

Commentary

Mechanical and electrical failures caused 27% of all fires and 22% of the losses. Misuse of source of ignition caused 21% of all fires and 13% of all property losses. The average loss in an incendiary fire was $11,138.

Property Losses Related to Source of Ignition – 1988

Property Classification	Cooking Equipment		Heating Equipment		Appliances and Equipment		Electrical Distribution Equipment	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	46	378,306	7	292,108	10	8,643	13	210,069
Institutional	9	8,934	3	6,750	5	155,350	0	0
Residential	740	4,057,785	303	4,418,115	162	1,422,844	116	2,222,775
Business	2	32,445	4	81,700	4	44,200	7	57,051
Mercantile	6	250,876	16	489,048	8	116,187	23	317,194
Manufacturing	5	21,476	12	153,002	3	38,000	7	220,779
Storage	6	17,378	38	1,510,277	8	120,632	26	272,543
Special	43	29,378	39	1,391,149	31	96,268	33	3,236,247
Miscellaneous	3	4,400	30	586,557	10	8,084	55	459,230
Total	**860**	**4,800,978**	**452**	**8,928,706**	**241**	**2,010,208**	**1,080**	**6,995,888**

Property Classification	Other Electrical Equipment		Smoker's Material and "Open" Flames		Exposure		Miscellaneous	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	9	39,125	73	2,226,466	5	27,933	8	76,608
Institutional	0	0	25	72,664	0	0	3	6,245
Residential	54	523,755	629	6,961,272	121	1,234,033	46	618,160
Business	2	143,200	19	420,414	3	7,000	7	503,011
Mercantile	12	893,165	42	1,657,973	13	188,429	9	68,228
Manufacturing	5	83,650	21	1,220,989	11	86,060	51	2,298,889
Storage	6	11,205	83	651,256	109	945,803	29	304,808
Special	16	112,771	1,042	1,621,978	428	1,185,289	725	4,218,396
Miscellaneous	30	320,213	119	908,738	410	1,792,103	59	395,094
Total	**134**	**2,127,084**	**2,053**	**15,741,750**	**1,100**	**5,466,650**	**937**	**8,492,439**

Property Classification	Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	25	4,390,536	196	7,652,794
Institutional	0	0	45	249,943
Residential	196	7,105,165	2,367	28,563,904
Business	6	191,535	54	1,480,556
Mercantile	21	1,509,249	150	5,490,349
Manufacturing	19	1,044,015	134	5,166,860
Storage	80	2,623,932	385	6,457,834
Special	952	11,691,056	4,109	23,582,532
Miscellaneous	122	4,234,016	838	8,708,435
Total	**1,421**	**32,789,504**	**8,278**	**87,353,207**

Commentary

Smoker's material and open flames were the source of ignition for 25% of the fires and 18% of the losses. Where a source of ignition was identified, the highest average loss of $19,753 was in fires where the source was heating equipment. In residential properties the highest average loss, $19,161 was in fires where the source of ignition was electrical distribution equipment.

Property Losses Related to Fuel or Energy – 1988

Property Classification	Coal or Wood, etc.		Fuel Oil		Gasoline		Natural Gas or Other Fuel Gas	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	6	23,201	0	0	0	0	46	621,563
Institutional	0	0	1	1,000	0	0	9	141,250
Residential	198	2,263,047	10	64,495	15	210,787	243	3,356,187
Business	0	0	0	0	0	0	4	83,200
Mercantile	2	17,932	1	3,000	0	0	24	552,443
Manufacturing	3	3,680	3	90,000	0	0	27	744,736
Storage	13	112,127	2	7,000	8	103,100	46	1,137,699
Special	24	51,468	52	1,560,035	568	1,948,760	129	862,545
Miscellaneous	10	270,583	8	50,179	18	29,299	19	573,958
Total	**256**	**2,742,038**	**77**	**1,775,709**	**609**	**2,291,946**	**547**	**8,073,581**

Property Classification	Smoker's Material		Electricity		Lightning		Exposure	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	56	2,127,872	41	289,747	0	0	5	27,933
Institutional	21	36,588	10	30,785	1	5,000	0	0
Residential	517	5,752,574	946	7,454,592	5	29,104	122	1,235,033
Business	15	399,914	18	643,396	0	0	3	7,000
Mercantile	30	1,559,702	48	1,572,047	0	0	13	188,429
Manufacturing	7	929,606	30	1,100,975	1	40,000	10	84,060
Storage	49	266,253	53	1,044,861	4	26,740	108	940,803
Special	889	1,049,185	897	3,483,135	3	6,670	426	1,192,994
Miscellaneous	94	630,757	104	873,796	8	23,742	409	1,790,103
Total	**1,678**	**12,752,451**	**2,147**	**16,493,334**	**22**	**131,256**	**1,096**	**5,466,355**

Property Classification	Unclassified		Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	15	169,442	27	4,393,036	196	7,652,794
Institutional	3	35,320	0	0	45	249,943
Residential	96	947,058	215	7,251,027	2,367	28,563,904
Business	7	140,511	7	206,535	54	1,480,556
Mercantile	7	68,027	25	1,528,769	150	5,490,349
Manufacturing	31	1,119,588	22	1,054,215	134	5,166,860
Storage	19	173,179	83	2,646,072	385	6,457,834
Special	163	1,869,283	958	11,558,457	4,109	23,582,532
Miscellaneous	42	204,087	126	4,261,931	838	8,708,435
Total	**383**	**4,726,495**	**1,463**	**32,900,042**	**8,278**	**87,353,207**

Commentary

Electricity was the most commonly identified fuel or energy resulting in 26% of the fires. The average loss in a fire initially fueled by fuel oil is $23,061.

Property Losses
Related to Material First Ignited – 1988

Property Classification	Structural Components		Furniture, Furnishings		Clothing, Textiles		Wood, Paper Products	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	30	1,993,021	10	318,277	10	3,837	32	1,788,823
Institutional	1	1	13	6,639	8	26,142	6	33,185
Residential	373	5,296,954	380	4,368,239	110	1,129,183	145	1,751,673
Business	6	10,500	3	73,700	1	10	12	371,450
Mercantile	25	552,544	2	6,300	6	304,675	23	805,139
Manufacturing	18	107,622	3	476,721	1	16,500	24	874,028
Storage	107	1,540,844	7	50,815	5	15,173	52	326,320
Special	89	169,688	85	155,258	49	316,540	250	533,520
Miscellaneous	328	1,762,589	3	18,901	5	7,009	69	103,594
Total	**977**	**11,433,763**	**506**	**5,474,850**	**195**	**1,819,069**	**613**	**6,587,732**

Property Classification	Flammable & Combustible Liquids		Flammable Gases		Chemicals		Agricultural Products	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	50	791,285	5	18,647	3	500	2	1,300
Institutional	6	1,926	4	10,750	0	0	1	50
Residential	637	4,106,255	59	587,213	61	249,524	46	294,523
Business	4	23,510	2	61,200	1	2,200	0	0
Mercantile	28	906,128	9	180,950	8	23,830	3	8,350
Manufacturing	26	1,559,022	7	423,331	5	27,321	10	80,057
Storage	58	1,273,969	12	595,475	11	66,097	18	215,508
Special	991	6,245,119	73	261,172	74	510,302	389	1,054,365
Miscellaneous	39	419,795	16	496,005	10	14,448	178	1,061,575
Total	**1,839**	**15,327,009**	**187**	**2,634,743**	**173**	**894,222**	**647**	**2,715,728**

Property Classification	Miscellaneous		Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	33	136,722	21	2,600,382	196	7,652,794
Institutional	5	136,250	1	35,000	45	249,943
Residential	315	2,781,196	241	7,999,144	2,367	28,563,904
Business	19	745,261	6	192,725	54	1,480,556
Mercantile	32	503,446	14	2,198,987	150	5,490,349
Manufacturing	15	294,861	25	1,307,397	134	5,166,860
Storage	49	291,167	66	2,082,466	385	6,457,834
Special	1,259	2,484,944	850	11,797,030	4,109	23,582,532
Miscellaneous	68	558,585	122	4,265,934	838	8,708,435
Total	**1,795**	**7,932,432**	**1,346**	**32,479,065**	**8,278**	**87,353,207**

Commentary

When identified, the materials most commonly first ignited were flammable and combustible liquids (22%). These fires resulted in 18% of the losses.

Property Losses Related to Initial Detection – 1988

Property Classification	Smoke Alarm/ Detector Device		Heat Alarm/ Detector Device		Automatic Systems		Visual Sighting	
	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	11	75,468	3	355,563	5	9,793	176	7,211,969
Institutional	12	38,477	3	25,311	1	130,000	29	56,155
Residential	226	1,479,659	5	22,150	12	17,596	2,118	26,845,431
Business	3	145,200	3	363,800	1	7,045	47	964,511
Mercantile	3	7,984	1	500	4	31,060	141	5,450,505
Manufacturing	2	36,000	0	0	7	143,917	125	4,986,943
Storage	0	0	0	0	5	1,044,311	379	5,411,757
Special	3	8,100	0	0	1	300	4,102	23,552,632
Miscellaneous	0	0	1	1	0	0	835	8,658,834
Total	**260**	**1,790,888**	**16**	**767,325**	**36**	**1,384,022**	**7,952**	**83,138,737**

Property Classification	Unclassified or Unknown		Total	
	Number Of Fires	Losses	Number Of Fires	Losses
Assembly	1	1	196	7,652,794
Institutional	0	0	45	249,943
Residential	6	199,068	2,367	28,563,904
Business	0	0	54	1,480,556
Mercantile	1	300	150	5,490,349
Manufacturing	0	0	134	5,166,860
Storage	1	1,766	385	6,457,834
Special	3	21,500	4,109	23,582,532
Miscellaneous	2	49,600	838	8,708,435
Total	**12**	**272,235**	**8,278**	**87,353,207**

Commentary

The average loss of a fire first detected by visual sighting was $10,455. The average loss of a fire first detected by a smoke alarm/detector was $6,888.

Fires by Method of Fire Control and Extinguishment – 1988

Method of Fire Control and Extinguishment	Number Of Fires	% Of Total	Losses	% Of Total
Hand Fire Extinguisher				
Water pump tank	247	3.0	1,566,103	1.8
Water pressurized	111	1.3	888,100	1.0
Water soda-acid	1	—	1,000	—
Foam	9	.1	417,000	.5
Vapourizing liquid/Halon	9	.1	14,851	—
CO_2	36	.4	155,366	.2
Dry chemical	399	4.8	971,617	1.1
Multi-purpose dry chemical	84	1.0	225,858	.3
Hand fire extinguisher - unclassified	28	.3	59,979	.1
Sub-Total	**924**	**11.2**	**4,299,874**	**4.9**
Standpipe System				
Small hose, 38 mm nominal size, straight stream nozzle	21	.3	132,790	.2
Small hose, 38 mm nominal size, combination nozzle	155	1.9	2,122,148	2.4
Large hose, 65 mm nominal size, straight stream nozzle	2	—	501	—
Large hose, 65 mm nominal size, combination nozzle	16	.2	171,372	.2
Continuous flow hose, less than 38 mm nominal size, straight stream nozzle	0	—	0	—
Continuous flow hose, less than 38 mm nominal size, combination nozzle	2	—	100	—
Standpipe system - unclassified	5	.1	80,554	.1
Sub-Total	**201**	**2.4**	**2,507,465**	**2.9**
"Makeshift" Fire Fighting Aid				
Garden hose	174	2.1	263,798	.3
Water bucket	93	1.1	135,390	.2
Small water container	122	1.5	151,957	.2
Sand bucket	3	—	2,800	—
Dry chemical and scoop	2	—	4,000	—
Baking soda	25	.3	44,290	.1
Smothering by covering	84	1.0	128,031	.1
Snow	27	.3	53,759	.1
"Makeshift"fire fighting aid - unclassified	54	.7	71,715	.1
Sub-Total	**584**	**7.1**	**855,740**	**1.0**
Fire Department – Water				
Booster hose, 25 mm or less	282	3.4	461,353	.5
38 mm hose, 1 hoseline	1,777	21.5	8,272,318	9.5
38 mm hose, 2 or more hoselines	1,022	12.3	16,369,839	18.7
65 mm hose, 1 hoseline	24	.3	142,550	.2
65 mm hose, 2 or more hoselines	76	.9	2,743,741	3.1
77 mm or larger hose, 1 or more hoselines	4	—	22,934	—
Combinations of 38 mm, 65 mm, 77 mm or larger hoselines	350	4.2	21,562,870	24.7
Portable water deluge set	9	.1	305,995	.4
Fire department - water - unclassified	47	.6	550,261	.6
Sub-Total	**3,591**	**43.4**	**50,431,861**	**57.7**

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Fires by Method of Fire Control and Extinguishment – 1988 (cont'd)

Method of Fire Control and Extinguishment	Number Of Fires	% Of Total	Losses	% Of Total
Fire Department - Other Than Water				
Crash-fire foam vehicle, using monitor	0	—	0	—
Crash-fire foam vehicle, using handlines	1	—	5,000	—
Pumper, foam handlines only, via educator	18	.2	464,164	.5
Vehicle, combination, foam-dry chemical	2	—	8,000	—
Vehicle, dry chemical, under 450 kg	7	.1	28,505	—
Vehicle, dry chemical, 450 kg and over	0	—	0	—
Fire department - other than water - unclassified	12	.1	34,533	—
Sub-Total	**40**	**.5**	**540,202**	**.6**
Sprinkler System				
Wet pipe system, central station supervised, standard watchman service, or alarm connection to fire department	14	.2	269,913	.3
Wet pipe system, local alarm only	18	.2	61,701	.1
Dry pipe system, central station supervised, standard watchman service, or alarm connection to fire department	2	—	7,245	—
Dry pipe system, local alarm only	1	—	18,000	—
Pre-action system, central station supervised, standard watchman service, or alarm connection to fire department	0	—	0	—
Pre-action system, local alarm only	0	—	0	—
Engineered systems	0	—	0	—
Sprinkler system - unclassified	4	—	10,660	—
Sub-Total	**39**	**.5**	**367,519**	**.4**
Fixed System Other Than Sprinklers				
Carbon dioxide system	0	—	0	—
Dry chemical system	2	—	11,849	—
Halon system	1	—	5,500	—
Conventional (Protein) foam system	0	—	0	—
High expansion foam system	0	—	0	—
Foam-water system	0	—	0	—
Water spray system	0	—	0	—
Fixed system other than sprinklers - unclassified	1	—	1	—
Sub-Total	**4**	**—**	**17,350**	**—**
Burned Out				
Completely burned out before arrival of fire department	212	2.6	726,986	.8
Incapable of control by fire department on arrival	26	.3	1,675,073	1.9
Burned out - unclassified	146	1.8	654,684	.7
Sub-Total	**384**	**4.6**	**3,056,743**	**3.5**
Miscellaneous				
Portable high expansion foam generator	0	—	0	—
CO_2 handhose system, 25 kg or more	0	—	0	—
Dry chemical system, handhose system, 25 kg or more	2	—	261,049	.3
Miscellaneous - unclassified	73	.9	196,977	.2
Miscellaneous - cannot be determined	2,436	29.4	24,818,427	28.4
Sub-Total	**2,511**	**30.3**	**25,276,453**	**28.7**
Total	**8,278**	**100.0**	**87,353,207**	**99.9**

Commentary:
Where identified, 11% of all fires were extinguished by a hand fire extinguisher. Another 7% were extinguished by makeshift firefighting aids.

Home Fire Losses in Alberta – 1988

Type	Incidents	Deaths	Injuries	$ Loss
1 & 2 Family Dwellings	1,503	18	130	20,305,169
Mobile Home	166	12	21	3,903,628
Apartment, Tenement	493	6	78	3,351,764
Total	**2,162**	**36**	**229**	**27,560,561**

Home Fires by Major Areas of Fire Origin – 1988

Area of Origin	% Of Incidents	% Of Deaths	% Of Injuries	% Of $ Loss
Kitchen	34	8	30	17
Structural Area	15	8	10	24
Living Room	12	33	19	14
Bedroom	12	36	17	14
Laundry Area	5	—	3	3
Heating Equipment Room	3	—	5	5
Chimney	3	—	—	1
Other	16	15	16	22

Home Fires by Major Sources of Ignition – 1988

Area of Origin	Source of Ignition	Percent Of All Fires In Area Of Origin Incidents	Deaths	Injuries	$ Loss
Kitchen	Stove or range, top burner area	72	67	86	60
Structural Area	Exposure fires	25	—	9	17
	Electrical: wiring; distribution	14	—	—	16
	Fireplace	12	—	5	14
Living Room	Smoker's material*	35	33	39	25
	Match, lighter not used with smoking	16	8	23	25
	Fireplace	18	—	7	8
Bedroom	Match, lighter not used with smoking	29	15	63	26
	Smoker's material*	31	46	28	20
	Candle	4	8	0	4
	Incandescent lamp, Light bulb	6	0	3	1
Laundry Area	Clothes dryer	56	0	25	34
Heating Equip. Area	Central heating unit	47	0	27	29
	Service water heater	25	0	36	25
Chimney	Fireplace	49	0	0	23
	Match, lighter not used with smoking	13	0	8	2
	Smoker's material*	22	40	29	17

* Smoker's material includes cigarettes, pipe, cigar and/or matches, lighter used in conjunction with smoking.

Home Fires by Major Ignition Scenarios – 1988

Area and Source of Ignition	Material First Ignited	Act or Omission	Percent Of All Fires In Area Of Origin – Source Of Ignition Incidents	Deaths	Injuries	$ Loss
Kitchen:						
Stove or range top burner area						
Fire in pan	Cooking oil	Overheated oil	59*	—	50	60
Fire in deep-fat fryer/pot	Cooking oil	Overheated oil	70	—	62	67
Structural Areas:						
Exposure fire from detached structure	Mainly exterior wall cover	Several	77	—	100	73
Electrical: wiring; distribution equip.	Insulation	Electrical Short Circuit	55	—	50	50
Fireplace	Wall structure	Installation deficiency	13	—	—	3
Match, lighter not used with smoking	Several	Arson	54	—	—	5
		Children playing	38	—	—	93
Living Room:						
Smoker's material	Upholstered furniture	Smoker's material**	71	100	65	78
Match, lighter not used with smoking	Carpet/rug, furnishings, paper products, clothing	Children playing	69	100	90	58
Fireplace	Carpet/rug	Human failing	54	—	—	13
Bedroom:						
Match, lighter not used with smoking	Carpet/rug, furnishings, paper products	Children playing	69	100	72	52
	clothing	Arson	14	—	4	21
Smoker's material	Mattress, bedding	Smoker's material	53	33	36	35
		Asleep	6	—	—	2
		Impaired	14	50	—	13
Laundry Area:						
Clothes dryer	Fibres/lint, clothing textiles, fabric, etc.	Ignorance of hazard	23	—	—	2
		Mechanical, electrical failure, malfunction	25	—	—	23
Heating Equipment Room:						
Central heating unit	Ceiling/covering, fuel oil, natural gas, propane, fibres, electrical/insulation	Mechanical, electrical failure, malfunction	35	—	—	6
Service water heater	Clothing, cardboard, gasoline, flammable liquid, propane	Fuel: spilled; used for cleaning; too close to heat; improper storage; ignorance of hazard	33	—	100	52

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Home Fires by Major Ignition Scenarios – 1988 (cont'd)

Area and Source of Origin	Material First Ignited	Act or Omission	Percent Of All Fires In Area Of Origin – Source Of Ignition Incidents	Deaths	Injuries	$ Loss
Chimney:						
Fireplace	Creosote	Ignorance of hazard, misuse, overfuelling	93	—	—	92
Other:						
Match, lighter not used with smoking	Carpet/rug, furniture, clothing, wood/paper, gasoline, fibres, trash	Children playing	34	—	60	50
Smoker's material	Furniture, mattress, bedding, clothing, wood/paper, trash	Smoker's material	58	—	—	62

* Interpreted as follows: 59 percent of all fires in the kitchen – stove or range top burner area were from the ignition of cooking oil in pans, as a result of overheating.

** Misuse of smoker's material.

Home Fires by Smoke Alarm Operation – 1988

Smoke Alarm Operation	No. Of Fires	% Of Total	No. Of Deaths	% Of Total	No. Of Injuries	% Of Total	Dollar Losses	% Of Total
a) Smoke alarm installation:								
– not installed	1,167	54.0	26	72.2	82	35.8	14,701,949	53.3
– installed	995	46.0	10	27.8	147	64.2	12,858,612	46.7
Total	2,162	100.0	36	100.0	229	100.0	27,560,561	100.0
b) Activation of installed alarms:								
– activated	483	48.5	3	30.0	70	47.6	6,341,976	49.3
– not activated	361	36.3	3	30.0	58	39.5	2,377,640	18.5
– unknown	151	15.2	4	40.0	19	12.9	4,138,996	32.2
Total	995	100.0	10	100.0	147	100.0	12,858,612	100.0
c) Alarm activation vs occupants' action/condition:								
– evacuated	263	54.5	2	66.7	42	60.0	3,968,041	62.6
– unnecessary to evacuate	138	28.6	—	—	8	11.4	495,798	7.8
– under the influence of alcohol/drugs	4	.8	—	—	2	2.9	8,800	.1
– unable to respond	4	.8	1	33.3	2	2.9	151,269	2.4
– alarm inaudible	2	.4	—	—	2	2.9	109,319	1.7
– unknown	8	1.7	—	—	—	—	54,878	.9
– other	64	13.3	—	—	14	20.0	1,553,871	24.5
Total	483	100.0	3	100.0	70	100.0	6,341,976	100.0
d) Alarms not activated – reasons:								
– Battery missing	72	19.9	1	50.0	19	32.8	594,787	25.0
– Battery dead	31	8.6	—	—	3	5.2	350,090	14.7
– Electricity off	13	3.6	—	—	8	13.8	128,805	5.4
– Electricity not connected	15	4.2	—	—	2	3.4	38,858	1.6
– Mechanical failure	9	2.5	—	—	2	3.4	24,322	1.0
– Not enough smoke	148	41.0	—	—	9	15.5	449,783	18.9
– Unsuitable location	7	1.9	—	—	1	1.7	18,387	.8
– Unknown	36	10.0	—	—	6	10.3	443,886	18.7
– Other	30	8.3	1	50.0	8	13.8	328,722	13.8
Total	361	100.0	2	100.0	58	100.0	2,377,640	100.0

Commentary:

Smoke alarms were not installed in 54% of the homes that had fires in 1988. Alarms did not activate in 36% of the fires in homes with smoke alarms. No power source and inadequate smoke were the two primary reasons for lack of alarm activation. Occupants were alerted in 83% of the home fires where smoke alarms activated.

Municipal Fire Loss Statistics

for the Year Ending December 31, 1988

Municipality	1988					10 Year Total		10 Year Average	
	Population	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss
County 1									
Cnty of Grande Prairie	12,042	89	806,860	7.3	67.00	1,132	12,594,106	9.4	104.58
Beaverlodge	1,808	6	124,920	3.3	69.09	50	708,824	2.7	39.20
Hythe	688	4	75,128	5.8	109.19	23	517,422	3.3	75.20
Sexsmith	1,256	3	1,506	2.3	1.19	45	671,365	3.5	53.45
Wembley	1,227	3	62,000	2.4	50.52	34	382,029	2.7	31.13
Total	**17,021**	**105**	**1,070,414**	**6.1**	**62.88**	**1,284**	**14,873,746**	**7.5**	**87.38**
County 2									
Cnty of Vulcan	3,656	28	636,310	7.6	174.04	172	3,206,100	4.7	87.69
Vulcan	1,422	3	7,774	2.1	5.46	27	177,675	1.8	12.49
Arrowwood	140	—	—	—	—	2	82,798	1.4	59.14
Carmangay	262	3	22	11.4	.08	10	40,625	3.8	15.50
Champion	358	—	—	—	—	9	57,201	2.5	15.97
Lomond	177	1	6,000	5.6	33.89	6	106,976	3.3	60.43
Milo	114	—	—	—	—	4	5,283	3.5	4.63
Total	**6,129**	**35**	**650,106**	**5.7**	**106.07**	**230**	**3,676,658**	**3.7**	**59.98**
County 3									
Cnty of Ponoka	7,739	60	676,047	7.7	87.35	512	4,493,012	6.6	58.05
Ponoka	5,473	8	28,969	1.4	5.29	141	2,815,261	2.5	51.43
Rimbey	1,748	3	1,200	1.7	.68	66	362,142	3.7	20.71
Parkland Beach	48	—	—	—	—	—	—	—	—
Total	**15,008**	**71**	**706,216**	**4.7**	**47.05**	**719**	**7,670,415**	**4.7**	**51.10**
County 4									
Cnty of Newell	6,143	62	579,052	10.0	94.26	392	47,443,056	6.3	772.31
Brooks	9,464	14	303,981	1.4	32.11	208	4,178,503	2.1	44.15
Bassano	1,186	1	7,500	.8	6.32	34	167,552	2.8	14.12
Duchess	430	—	—	—	—	7	84,696	1.6	19.69
Rosemary	321	—	—	—	—	3	6,875	.9	2.14
Tilley	362	—	—	—	—	7	238,210	1.9	65.80
Total	**17,906**	**77**	**890,533**	**4.3**	**49.73**	**651**	**52,118,892**	**3.6**	**291.06**
County 5									
Cnty of Warner	3,579	20	144,486	5.5	40.37	172	2,004,409	4.8	56.00
Warner	490	—	—	—	—	14	138,398	2.8	28.24
Milk River	861	1	2,514	1.1	2.91	20	185,055	2.3	21.49
Raymond	2,957	5	10,531	1.6	3.56	65	444,035	2.1	15.01
Coutts	359	—	—	—	—	14	667,132	3.8	185.83
Stirling	796	3	54,182	3.7	68.06	20	162,991	2.5	20.47
Total	**9,042**	**29**	**211,713**	**3.2**	**23.41**	**305**	**3,062,020**	**3.3**	**39.83**

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Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988 Popu-lation	1988 Fire Count	1988 Amount Of Loss	1988 Fire Rate	1988 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 6									
Cnty of Stettler	5,179	41	121,701	7.9	23.49	349	3,992,750	6.7	77.09
Stettler	5,147	12	164,030	2.3	31.86	164	6,419,255	3.1	124.71
Big Valley	295	3	47,241	10.1	160.13	12	82,519	4.0	27.97
Botha	180	—	—	—	—	6	27,274	3.3	15.15
Donalda	236	—	—	—	—	8	80,901	3.3	34.28
Gadsby	35	—	—	—	—	2	45,001	5.7	128.57
Rochon Sands	32	—	—	—	—	2	12,576	6.2	39.30
White Sands	2	—	—	—	—	—	—	—	—
Total	**11,106**	**56**	**332,972**	**5.0**	**29.98**	**543**	**10,660,276**	**4.8**	**95.98**
County 7									
Cnty of Thorhild	3,094	25	191,213	8.0	61.80	176	2,914,709	5.6	94.20
Thorhild	481	6	3,501	12.4	7.27	19	46,292	3.9	9.62
Radway	200	—	—	—	—	3	5,930	1.5	2.96
Total	**3,775**	**31**	**194,714**	**8.2**	**51.57**	**198**	**2,966,931**	**5.2**	**78.59**
County 8									
Cnty of Forty Mile	3,335	41	302,420	12.2	90.68	195	2,269,254	5.8	68.04
Foremost	595	1	583	1.6	.97	23	104,558	3.8	17.57
Bow Island	1,566	9	119,137	5.7	76.07	52	697,551	3.3	44.54
Burdett	278	—	—	—	—	5	178,450	1.7	64.19
Total	**5,774**	**51**	**422,140**	**8.8**	**73.11**	**275**	**3,249,813**	**4.7**	**56.28**
County 9									
Cnty of Beaver	5,400	41	418,681	7.5	77.53	338	2,723,841	6.2	50.44
Ryley	500	—	—	—	—	13	42,156	2.6	8.43
Tofield	1,483	2	1,241	1.3	.83	38	349,701	2.5	23.58
Viking	1,160	1	1,232	.8	1.06	25	1,589,917	2.1	137.06
Holden	411	1	20,000	2.4	48.66	4	23,084	.9	5.61
Total	**8,954**	**45**	**441,154**	**5.0**	**49.26**	**418**	**4,728,699**	**4.6**	**52.81**
County 10									
Cnty of Wetaskiwin	9,521	50	617,519	5.2	64.85	518	5,208,620	5.4	54.70
Crystal Springs	32	—	—	—	—	2	21,677	6.2	67.74
Ma-Me-O Beach	85	—	—	—	—	20	679,307	23.5	799.18
Millet	1,540	7	17,241	4.5	11.19	32	146,864	2.0	9.53
Silver Beach	25	—	—	—	—	—	—	—	—
Grandview	55	—	—	—	—	3	17,567	5.4	31.94
Argentia Beach	3	—	—	—	—	3	348,079	100.0	11,602.63
Poplar Bay	43	—	—	—	—	2	23,200	4.6	53.95
Total	**11,304**	**57**	**634,760**	**5.0**	**56.15**	**580**	**6,445,314**	**5.1**	**57.01**
County 11									
Cnty of Barrhead	5,728	35	222,100	6.1	38.77	236	9,785,699	4.1	170.83
Barrhead	3,991	7	117,897	1.7	29.54	80	868,526	2.0	21.76
Total	**9,719**	**42**	**339,997**	**4.3**	**34.98**	**316**	**10,654,225**	**3.2**	**109.62**

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Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988 Population	1988 Fire Count	1988 Amount Of Loss	1988 Fire Rate	1988 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 12									
Cnty of Athabasca	5,979	30	433,038	5.0	72.42	294	3,417,487	4.9	57.15
Athabasca	1,975	6	15,660	3.0	7.92	57	2,818,863	2.8	142.72
Boyle	704	2	55,020	2.8	78.15	19	95,312	2.6	13.53
Island Lake	126	—	—	—	—	—	—	—	—
Sunset Beach	38	—	—	—	—	1	2,000	2.6	5.26
Mewatha Beach	28	—	—	—	—	1	1	3.5	—
South Baptiste	68	—	—	—	—	—	—	—	—
Bondiss	59	—	—	—	—	—	—	—	—
Island Lake South	62	—	—	—	—	1	83,000	1.6	133.87
White Gull	15	—	—	—	—	—	—	—	—
West Baptiste	22	—	—	—	—	—	—	—	—
Whispering Hills	26	—	—	—	—	—	—	—	—
Total	**9,102**	**38**	**503,718**	**4.1**	**55.34**	**373**	**6,416,663**	**4.0**	**70.49**
County 13									
Cnty of Smoky Lake	2,789	26	110,804	9.3	39.72	226	2,323,387	8.1	83.30
Smoky Lake	1,045	1	200	.9	.19	30	451,088	2.8	43.16
Vilna	325	—	—	—	—	9	95,558	2.7	29.40
Warspite	97	1	8,500	10.3	87.62	2	14,242	2.0	14.68
Waskatenau	276	—	—	—	—	1	1,888	.3	.68
Total	**4,532**	**28**	**119,504**	**6.1**	**26.36**	**268**	**2,886,163**	**5.9**	**63.68**
County 14									
Cnty of Lacombe	8,911	70	524,419	7.8	58.85	776	8,627,352	8.7	96.81
Lacombe	6,110	16	29,589	2.6	4.84	180	2,568,497	2.9	42.03
Alix	793	—	—	—	—	15	154,426	1.8	19.47
Bentley	841	1	578	1.1	.68	26	90,858	3.0	10.80
Blackfalds	1,688	2	35,125	1.1	20.80	41	100,468	2.4	5.95
Clive	356	—	—	—	—	8	24,571	2.2	6.90
Eckville	869	9	137,811	10.3	158.58	39	460,556	4.4	52.99
Gull Lake	102	1	1,000	9.8	9.80	12	190,500	11.7	186.76
Mirror	508	—	1	—	—	9	131,946	1.7	25.97
Birchcliff	48	—	—	—	—	—	—	—	—
Half Moon Bay	45	—	—	—	—	—	—	—	—
Total	**20,271**	**99**	**728,522**	**4.8**	**35.93**	**1,106**	**12,349,174**	**5.4**	**60.92**
County 16									
Cnty of Wheatland	5,407	23	1,710,001	4.2	316.25	485	5,720,980	8.9	105.80
Strathmore	3,544	3	1,420	.8	.40	100	2,667,798	2.8	75.27
Gleichen	327	—	—	—	—	10	85,741	3.0	26.22
Cluny	94	—	—	—	—	8	1,544	8.5	1.64
Hussar	151	—	—	—	—	10	1,964,865	6.6	1,301.23
Rockyford	293	1	7,000	3.4	23.89	8	40,236	2.7	13.73
Standard	336	1	16,000	2.9	47.61	13	102,409	3.8	30.47
Total	**10,152**	**28**	**1,734,421**	**2.7**	**170.84**	**634**	**10,583,573**	**6.2**	**104.25**

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Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988					10 Year Total		10 Year Average	
	Population	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss
County 17									
Cnty of Mountain View	8,886	84	1,239,779	9.4	139.52	685	18,488,624	7.7	208.06
Didsbury	3,184	12	348,710	3.7	109.51	100	607,123	3.1	19.06
Olds	5,004	8	37,293	1.5	7.45	136	1,669,953	2.7	33.37
Sundre	1,732	9	203,379	5.1	117.42	62	1,114,668	3.5	64.35
Carstairs	1,498	4	10,996	2.6	7.34	49	821,185	3.2	54.81
Cremona	351	2	1,821	5.6	5.18	16	129,620	4.5	36.92
Total	**20,655**	**119**	**1,841,978**	**5.7**	**89.17**	**1,048**	**22,831,173**	**5.0**	**110.53**
County 18									
Cnty of Paintearth	2,439	19	63,453	7.7	26.01	170	2,136,319	6.9	87.58
Castor	1,030	1	250,000	.9	242.71	19	337,357	1.8	32.75
Coronation	1,310	3	3,588	2.2	2.73	48	2,113,376	3.6	161.32
Halkirk	155	1	33,000	6.4	212.90	10	115,043	6.4	74.22
Total	**4,934**	**24**	**350,041**	**4.8**	**70.94**	**247**	**4,702,095**	**5.0**	**95.29**
County 19									
Cnty of St. Paul	6,595	47	492,061	7.1	74.61	499	5,032,572	7.5	76.30
St. Paul	5,128	8	34,408	1.5	6.70	149	3,316,586	2.9	64.67
Elk Point	1,391	2	15,950	1.4	11.46	35	266,230	2.5	19.13
Horseshoe Bay	13	—	—	—	—	—	—	—	—
Total	**13,127**	**57**	**542,419**	**4.3**	**41.32**	**683**	**8,615,388**	**5.2**	**65.63**
County 20									
Cnty of Strathcona	18,597	95	405,766	5.1	21.81	1,510	22,297,422	8.1	119.89
Sherwood Park	31,205	54	505,386	1.7	16.19	600	2,389,496	1.9	7.65
Total	**49,802**	**149**	**911,152**	**2.9**	**18.29**	**2,110**	**24,686,918**	**4.2**	**49.57**
County 21									
Cnty of Two Hills	3,086	23	34,984	7.4	11.33	249	1,377,294	8.0	44.63
Two Hills	1,141	3	4,362	2.6	3.82	24	98,876	2.1	8.66
Derwent	149	—	—	—	—	4	15,319	2.6	10.28
Myrnam	383	—	—	—	—	7	4,379	1.8	1.14
Willingdon	371	—	—	—	—	12	68,136	3.2	18.36
Hairy Hill	73	—	—	—	—	5	1,046,482	6.8	1,433.53
Total	**5,203**	**26**	**39,346**	**4.9**	**7.56**	**301**	**2,610,486**	**5.7**	**50.17**
County 22									
Cnty of Camrose	7,475	58	334,690	7.7	44.77	496	4,752,457	6.6	63.57
Bashaw	829	3	4,312	3.6	5.20	30	155,069	3.6	18.70
Bawlf	375	1	1,005	2.6	2.68	9	1,602,184	2.4	427.24
Bittern Lake	158	—	—	—	—	3	33,815	1.8	21.40
Edberg	129	—	—	—	—	3	72,992	2.3	56.58
Ferintosh	125	1	250	8.0	2.00	2	4,750	1.6	3.80
Hay Lakes	294	2	176,623	6.8	600.75	11	202,027	3.7	68.71
New Norway	276	1	18,368	3.6	66.55	11	37,459	3.9	13.57
Rosalind	214	—	—	—	—	8	74,917	3.7	35.00
Total	**9,875**	**66**	**535,248**	**6.6**	**54.20**	**573**	**6,935,670**	**5.8**	**70.23**

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Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988 Popu-lation	1988 Fire Count	1988 Amount Of Loss	1988 Fire Rate	1988 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 23									
Cnty of Red Deer	13,911	91	2,932,183	6.5	210.78	965	11,338,733	6.9	81.50
Innisfail	5,535	7	93,836	1.2	16.95	141	1,825,828	2.5	32.98
Sylvan Lake	3,937	1	5,200	.2	1.32	119	1,050,402	3.0	26.68
Bowden	967	2	57,001	2.0	58.94	27	366,846	2.7	37.93
Delburne	577	—	—	—	—	15	146,950	2.5	25.46
Elnora	262	1	392	3.8	1.49	6	40,739	2.2	15.54
Penhold	1,495	4	16,100	2.6	10.76	49	982,691	3.2	65.73
Norglenwold	107	—	—	—	—	3	166,500	2.8	155.60
Jarvis Bay	55	—	—	—	—	—	—	—	—
Total	**26,846**	**106**	**3,104,712**	**3.9**	**115.64**	**1,325**	**15,918,689**	**4.9**	**59.29**
County 24									
Cnty of Vermilion River	8,112	57	252,701	7.0	31.15	556	7,047,120	6.8	86.87
Kitscoty	626	3	18,043	4.7	28.82	12	45,179	1.9	7.21
Vermilion	4,259	5	286,363	1.1	67.23	129	2,251,544	3.0	52.86
Dewberry	210	—	—	—	—	4	902,028	1.9	429.53
Marwayne	516	—	—	—	—	17	43,396	3.2	8.41
Paradise Valley	163	—	—	—	—	4	91,630	2.4	56.21
Total	**13,886**	**65**	**557,107**	**4.6**	**40.12**	**722**	**10,380,897**	**5.1**	**74.75**
County 25									
Cnty of Leduc	11,278	76	652,861	6.7	57.88	711	8,601,876	6.3	76.27
Calmar	1,160	1	670,000	.8	577.58	25	939,261	2.1	80.97
Devon	3,752	10	58,089	2.6	15.48	68	378,708	1.8	10.09
Breton	557	2	56,800	3.5	101.97	9	113,879	1.6	20.44
New Sarepta	344	—	—	—	—	19	340,689	5.5	99.03
Thorsby	632	—	—	—	—	13	91,696	2.0	14.50
Warburg	477	1	22,000	2.0	46.12	6	30,761	1.2	6.44
Itaska Beach	4	5	20,471	1,250.0	5,177.75	11	201,085	275.0	5,027.12
Golden Days	56	—	—	—	—	6	231,634	10.7	413.63
Sundance Beach	11	—	—	—	—	1	10,651	9.0	96.82
Beaumont	4,189	4	19,072	.9	4.55	43	195,380	1.0	4.66
Total	**22,460**	**99**	**1,499,293**	**4.4**	**66.75**	**912**	**11,135,620**	**4.0**	**49.57**
County 26									
Cnty of Lethbridge	8,266	69	380,195	8.3	45.99	705	5,918,297	8.5	71.59
Coaldale	4,964	6	23,538	1.2	4.74	104	503,610	2.0	10.14
Picture Butte	1,554	2	10,255	1.2	6.58	28	160,959	1.8	10.35
Barons	294	2	17,852	6.8	60.72	7	18,920	2.3	6.43
Nobleford	531	—	—	—	—	16	78,937	3.0	14.86
Coalhurst	1,289	5	25,299	3.8	19.62	41	305,673	3.1	23.71
Total	**16,898**	**84**	**457,139**	**4.9**	**27.05**	**901**	**6,986,396**	**5.3**	**41.34**

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Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988 Population	1988 Fire Count	1988 Amount Of Loss	1988 Fire Rate	1988 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 27									
Cnty of Minburn	3,894	21	113,298	5.3	29.09	256	2,754,525	6.5	70.73
Minburn	135	—	—	—	—	5	123,520	3.7	91.49
Mannville	778	2	71,441	2.5	91.82	23	200,924	2.9	25.82
Vegreville	5,276	6	39,350	1.1	7.45	121	622,770	2.2	11.80
Innisfree	219	1	5,008	4.5	22.86	3	11,653	1.3	5.32
Lavoy	126	—	—	—	—	2	27,461	1.5	21.79
Total	**10,428**	**30**	**229,097**	**2.8**	**21.96**	**410**	**3,740,853**	**3.9**	**35.87**
County 28									
Cnty of Lac Ste. Anne	7,765	20	326,942	2.5	42.10	384	4,950,671	4.9	63.75
Onoway	647	1	398	1.5	.61	21	128,200	3.2	19.81
Mayerthorpe	1,414	1	1	.7	—	29	673,128	2.0	47.60
Alberta Beach	425	3	63,630	7.0	149.71	40	427,587	9.4	100.60
Castle Island	7	—	—	—	—	—	—	—	—
Sunset Point	103	—	—	—	—	2	8,383	1.9	8.13
Sangudo	368	—	—	—	—	9	41,561	2.4	11.29
West Cove	48	—	—	—	—	1	66,750	2.0	139.06
Yellowstone	94	—	—	—	—	3	108,829	3.1	115.77
Ross Haven	73	—	—	—	—	5	100,677	6.8	137.91
Val Quentin	78	—	—	—	—	4	26,288	5.1	33.70
Silver Sands	67	—	—	—	—	1	1	1.4	—
Nakamun Park	10	—	—	—	—	—	—	—	—
South View	44	—	—	—	—	—	—	—	—
Total	**11,143**	**25**	**390,971**	**2.2**	**35.08**	**499**	**6,532,075**	**4.4**	**58.62**
County 29									
Cnty of Flagstaff	4,406	32	89,665	7.2	20.35	432	3,536,474	9.8	80.26
Sedgewick	877	2	2,450	2.2	2.79	15	233,665	1.7	26.64
Alliance	202	—	—	—	—	9	38,329	4.4	18.97
Daysland	685	1	517	1.4	.75	22	237,711	3.2	34.70
Hardisty	642	1	1,198	1.5	1.86	37	199,753	5.7	31.11
Forestburg	936	4	3,545	4.2	3.78	18	116,206	1.9	12.41
Galahad	176	2	15,252	11.3	86.65	5	17,609	2.8	10.00
Heisler	217	1	2,000	4.6	9.21	6	91,471	2.7	42.15
Killam	1,032	—	—	—	—	14	399,472	1.3	38.70
Lougheed	279	—	—	—	—	4	18,808	1.4	6.74
Strome	267	1	360	3.7	1.34	13	421,040	4.8	157.69
Total	**9,719**	**44**	**114,987**	**4.5**	**11.83**	**575**	**5,310,538**	**5.9**	**54.64**
County 30									
Cnty of Lamont	4,287	37	230,422	8.6	53.74	316	2,490,363	7.3	58.09
Lamont	1,505	—	—	—	—	28	251,774	1.8	16.72
Chipman	239	1	500	4.1	2.09	9	146,064	3.7	61.11
Mundare	606	2	3,542	3.3	5.84	23	144,917	3.7	23.91
Andrew	485	1	298	2.0	.61	20	683,788	4.1	140.98
Bruderheim	1,176	1	25,000	.8	21.25	31	308,974	2.6	26.27
Total	**8,298**	**42**	**259,762**	**5.0**	**31.30**	**427**	**4,025,880**	**5.1**	**48.51**

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Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988 Population	1988 Fire Count	1988 Amount Of Loss	1988 Fire Rate	1988 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
County 31									
Cnty of Parkland	20,926	92	578,935	4.3	27.66	1,214	19,220,781	5.8	91.85
Stony Plain	6,062	10	41,342	1.6	6.81	97	471,588	1.6	7.77
Betula Beach	10	—	—	—	—	—	—	—	—
Edmonton Beach	322	2	11,001	6.2	34.16	10	159,786	3.1	49.62
Entwistle	478	—	—	—	—	13	163,632	2.7	34.23
Kapasiwin	4	—	—	—	—	4	503	100.0	12.57
Lakeview	27	—	—	—	—	—	—	—	—
Point Alison	2	—	—	—	—	—	—	—	—
Seba Beach	96	—	—	—	—	4	50,601	4.1	52.70
Wabamun	589	—	—	—	—	14	78,229	2.3	13.28
Total	**28,516**	**104**	**631,278**	**3.6**	**22.13**	**1,356**	**20,145,120**	**4.7**	**70.64**
M.D. 1									
M.D. of Cypress	4,795	63	558,676	13.1	116.51	580	7,185,955	12.0	149.86
Irvine	301	2	26,379	6.6	87.63	13	130,591	4.3	43.38
Redcliff	3,834	16	117,104	4.1	30.54	138	1,141,320	3.5	29.76
Total	**8,930**	**81**	**702,159**	**9.0**	**78.62**	**731**	**8,457,866**	**8.1**	**94.71**
M.D. 6									
M.D. of Cardston	4,419	27	480,353	6.1	108.70	286	3,307,532	6.4	74.84
Cardston	3,497	17	249,656	4.8	71.39	114	3,136,240	3.2	89.68
Magrath	1,637	7	122,871	4.2	75.05	71	525,858	4.3	32.12
Glenwood	309	2	24,000	6.4	77.66	12	137,805	3.8	44.59
Hillspring	251	—	—	—	—	8	31,559	3.1	12.57
Total	**10,113**	**53**	**876,880**	**5.2**	**86.70**	**491**	**7,138,994**	**4.8**	**70.59**
M.D. 8									
M.D. of Big Horn	1,138	10	473,120	8.7	415.74	73	1,683,083	6.4	147.89
Ghost Lake	28	—	—	—	—	3	11,128	10.7	39.74
Canmore	4,419	7	29,838	1.5	6.75	111	1,171,968	2.5	26.52
Waiparous	16	—	—	—	—	—	—	—	—
Total	**5,601**	**17**	**502,958**	**3.0**	**89.79**	**187**	**2,866,179**	**3.3**	**51.17**
M.D. 9									
M.D. of Pincher Creek	3,093	22	273,409	7.1	88.39	211	2,681,054	6.8	86.68
Pincher Creek	3,800	3	11,750	.7	3.09	87	301,697	2.2	7.93
Cowley	290	1	2,184	3.4	7.53	9	68,673	3.1	23.68
Total	**7,183**	**26**	**287,343**	**3.6**	**40.00**	**307**	**3,051,424**	**4.2**	**42.48**
M.D. 14									
M.D. of Taber	5,284	70	285,449	13.2	54.02	509	5,339,191	9.6	101.04
Taber	6,382	16	171,163	2.5	26.81	196	8,870,048	3.0	138.98
Vauxhall	984	1	500	1.0	.50	15	315,068	1.5	32.01
Grassy Lake	244	—	—	—	—	27	1,570,254	11.0	643.54
Barnwell	402	—	—	—	—	5	25,983	1.2	6.46
Total	**13,296**	**87**	**457,122**	**6.5**	**34.38**	**752**	**16,120,544**	**5.6**	**121.24**

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Municipal Fire Loss Statistics

for the Year Ending December 31, 1988 (cont'd)

Municipality	1988					10 Year Total		10 Year Average	
	Population	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss
M.D. 26									
M.D. of Willow Creek	4,733	28	319,404	5.9	67.48	424	2,884,682	8.9	60.94
Stavely	469	—	—	—	—	12	515,445	2.5	109.90
Nanton	1,564	9	129,446	5.7	82.76	51	954,249	3.2	61.01
Claresholm	3,382	5	877,004	1.4	259.31	129	1,665,299	3.8	49.24
Fort MacLeod	3,123	4	118,728	1.2	38.01	82	634,636	2.6	20.32
Granum	371	—	—	—	—	26	3,451,318	7.0	930.27
Total	**13,642**	**46**	**1,444,582**	**3.3**	**105.89**	**724**	**10,105,629**	**5.3**	**74.07**
M.D. 31									
M.D. of Foothills	9,398	56	545,288	5.9	58.02	544	8,455,813	5.7	89.97
High River	5,096	9	223,050	1.7	43.76	101	1,939,630	1.9	38.06
Black Diamond	1,436	5	107,374	3.4	74.77	39	419,775	2.7	29.23
Okotoks	5,666	2	21,500	.3	3.79	73	705,710	1.2	12.45
Blackie	266	—	—	—	—	5	103,445	1.8	38.88
Cayley	216	—	—	—	—	—	—	—	—
Turner Valley	1,298	3	5,707	2.3	4.39	35	510,480	2.6	39.32
Longview	284	—	—	—	—	6	169,851	2.1	59.80
Total	**23,660**	**75**	**902,919**	**3.1**	**38.16**	**803**	**12,304,704**	**3.3**	**52.00**
M.D. 34									
M.D. of Acadia	618	5	40,778	8.0	65.98	23	143,593	3.7	23.23
Empress	229	—	—	—	—	8	333,027	3.4	145.42
Total	**847**	**5**	**40,778**	**5.9**	**48.14**	**31**	**476,620**	**3.6**	**56.27**
M.D. 44									
M.D. of Rocky View	17,484	136	1,799,900	7.7	102.94	1,715	19,086,533	9.8	109.16
Beiseker	518	—	—	—	—	24	497,667	4.6	96.07
Cochrane	4,337	15	329,793	3.4	76.04	144	1,760,605	3.3	40.59
Crossfield	1,472	5	8,384	3.3	5.69	27	259,719	1.8	17.64
Irricana	702	—	—	—	—	8	28,473	1.1	4.05
Chestermere Lake	609	2	53,000	3.2	87.02	20	495,525	3.2	81.36
Total	**25,122**	**158**	**2,191,077**	**6.2**	**87.21**	**1,938**	**22,128,522**	**7.7**	**88.08**
M.D. 47									
M.D. of Starland	2,120	18	136,097	8.4	64.19	143	1,499,604	6.7	70.73
Morrin	252	1	1,255	3.9	4.98	6	111,032	2.3	44.06
Delia	223	—	—	—	—	6	128,637	2.6	57.68
Munson	152	—	—	—	—	2	3,370	1.3	2.21
Rumsey	70	—	—	—	—	4	41,898	5.7	59.85
Total	**2,817**	**19**	**137,352**	**6.7**	**48.75**	**161**	**1,784,541**	**5.7**	**63.34**

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Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988 Population	1988 Fire Count	1988 Amount Of Loss	1988 Fire Rate	1988 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
M.D. 48									
M.D. of Kneehill	4,996	39	532,382	7.8	106.56	354	4,348,238	7.0	87.03
Three Hills	3,324	4	5,379	1.2	1.61	63	487,583	1.8	14.66
Acme	457	—	—	—	—	9	38,874	1.9	8.50
Trochu	892	3	2,791	3.3	3.12	26	329,444	2.9	36.93
Carbon	429	—	—	—	—	6	7,991	1.3	1.86
Linden	417	—	—	—	—	8	26,056	1.9	6.24
Torrington	209	—	—	—	—	12	43,074	5.7	20.60
Total	**10,724**	**46**	**540,552**	**4.2**	**50.40**	**478**	**5,281,260**	**4.4**	**49.24**
M.D. 52									
M.D. of Provost	2,725	20	511,654	7.3	187.76	275	3,171,558	10.0	116.38
Provost	1,725	5	13,144	2.8	7.61	57	1,454,123	3.3	84.29
Amisk	207	—	—	—	—	4	5,801	1.9	2.80
Czar	190	1	782	5.2	4.11	7	56,548	3.6	29.76
Hughenden	276	—	—	—	—	13	95,416	4.7	34.57
Total	**5,123**	**26**	**525,580**	**5.0**	**102.59**	**356**	**4,783,446**	**6.9**	**93.37**
M.D. 61									
M.D. of Wainwright	3,937	25	560,429	6.3	142.34	343	4,397,846	8.7	111.70
Wainwright	4,665	6	22,064	1.2	4.72	161	1,102,957	3.4	23.64
Irma	484	—	—	—	—	12	202,515	2.4	41.84
Chauvin	400	1	3,595	2.5	8.98	11	270,933	2.7	67.73
Edgerton	399	2	4,091	5.0	10.25	20	283,061	5.0	70.94
Total	**9,885**	**34**	**590,179**	**3.4**	**59.70**	**547**	**6,257,312**	**5.5**	**63.30**
M.D. 77									
M.D. of Brazeau	5,448	52	680,496	9.5	124.90	274	4,150,543	5.0	76.18
Drayton Valley	5,290	16	148,555	3.0	28.08	180	1,031,876	3.4	19.50
Total	**10,738**	**68**	**829,051**	**6.3**	**77.20**	**454**	**5,182,419**	**4.2**	**48.26**
M.D. 87									
M.D. of Bonnyville	10,384	50	411,632	4.8	39.64	469	4,576,445	4.5	44.07
Bonnyville	5,575	18	105,159	3.2	18.86	168	3,488,808	3.0	62.57
Cold Lake	3,445	9	210,048	2.6	60.97	89	901,061	2.5	26.15
Grand Centre	3,655	10	280,770	2.7	76.81	123	3,510,368	3.3	96.04
Bonnyville Beach	62	—	—	—	—	2	20,176	3.2	32.54
Glendon	480	3	54,506	6.2	113.55	11	101,966	2.2	21.24
Pelican Narrows	87	—	—	—	—	3	7,707	3.4	8.85
Total	**23,688**	**90**	**1,062,115**	**3.7**	**44.83**	**865**	**12,606,531**	**3.6**	**53.21**

– Continued on next page –

Municipal Fire Loss Statistics

for the Year Ending December 31, 1988 (cont'd)

Municipality	1988					10 Year Total		10 Year Average	
	Population	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss
M.D. 90									
M.D. of Sturgeon	14,019	90	1,075,145	6.4	76.69	930	15,986,602	6.6	114.03
Morinville	5,409	7	146,587	1.2	27.10	82	609,351	1.5	11.26
Gibbons	2,491	5	16,842	2.0	6.76	42	422,660	1.6	16.96
Sandy Beach	110	—	—	—	—	2	161,000	1.8	146.36
Bon Accord	1,355	2	16,000	1.4	11.80	18	61,802	1.3	4.56
Legal	949	1	1	1.0	—	24	183,464	2.5	19.33
Redwater	2,024	2	43,000	.9	21.24	39	748,820	1.9	36.99
Total	**26,357**	**107**	**1,297,575**	**4.0**	**49.23**	**1,137**	**18,173,699**	**4.3**	**68.95**
M.D. 92									
M.D. of Westlock	6,992	38	260,139	5.4	37.20	359	5,003,309	5.1	71.55
Westlock	4,463	11	24,817	2.4	5.56	93	1,909,582	2.0	42.78
Clyde	428	—	—	—	—	13	106,070	3.0	24.78
Larkspur	9	—	—	—	—	—	—	—	—
Total	**11,892**	**49**	**284,956**	**4.1**	**23.96**	**465**	**7,018,961**	**3.9**	**59.02**
M.D. 99									
M.D. of Clearwater	9,848	36	914,101	3.6	92.82	481	8,549,490	4.8	86.81
Rocky Mountain House	5,261	5	143,950	.9	27.36	158	2,411,066	3.0	45.82
Caroline	387	—	—	—	—	13	43,083	3.3	11.13
Total	**15,496**	**41**	**1,058,051**	**2.6**	**68.27**	**652**	**11,003,639**	**4.2**	**71.00**
M.D. 130									
M.D. of Smoky River	2,853	26	277,199	9.1	97.16	229	3,784,899	8.0	132.66
Falher	1,178	4	250,048	3.3	212.26	33	741,845	2.8	62.97
Girouxville	367	—	—	—	—	15	204,441	4.0	55.70
McLennan	1,021	5	586,567	4.8	574.50	39	1,632,441	3.8	159.88
Donnelly	405	—	—	—	—	21	200,073	5.1	49.40
Total	**5,824**	**35**	**1,113,814**	**6.0**	**191.24**	**337**	**6,563,699**	**5.7**	**112.70**
M.D. 133									
M.D. of Spirit River	848	18	68,388	21.2	80.64	150	1,698,737	17.6	200.32
Spirit River	1,086	3	34,830	2.7	32.07	28	212,684	2.5	19.58
Rycroft	672	1	6,426	1.4	9.56	20	673,499	2.9	100.22
Total	**2,606**	**22**	**109,644**	**8.4**	**42.07**	**198**	**2,584,920**	**7.5**	**99.19**
M.D. 135									
M.D. of Peace River	1,527	10	284,238	6.5	186.14	179	1,642,431	11.7	107.55
Berwyn	661	3	21,130	4.5	31.96	9	179,575	1.3	27.16
Grimshaw	2,625	4	44,896	1.5	17.10	72	1,039,685	2.7	39.60
Peace River	6,355	15	120,218	2.3	18.91	265	3,898,869	4.1	61.35
Total	**11,168**	**32**	**470,482**	**2.8**	**42.12**	**525**	**6,760,560**	**4.7**	**60.53**
M.D. 136									
M.D. of Fairview	1,903	20	132,589	10.5	69.67	220	2,142,349	11.5	112.57
Fairview	3,281	13	486,685	3.9	148.33	125	4,475,451	3.8	136.40
Total	**5,184**	**33**	**619,274**	**6.3**	**119.45**	**345**	**6,617,800**	**6.6**	**127.65**

– Continued on next page –

Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988 Population	1988 Fire Count	1988 Amount Of Loss	1988 Fire Rate	1988 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
I.D. #4	**150**	—	—	—	—	**11**	**127,662**	**7.3**	**85.10**
I.D. #5	**282**	**5**	**35,001**	**17.7**	**124.11**	**18**	**866,786**	**6.3**	**307.37**
I.D. #6	128	—	—	—	—	31	455,891	24.2	356.16
Crowsnest Pass	6,912	15	197,225	2.1	28.53	244	3,893,820	3.5	56.33
Total	**7,040**	**15**	**197,225**	**2.1**	**28.01**	**275**	**4,349,711**	**3.9**	**61.78**
I.D. #7	**1,147**	**10**	**57,182**	**8.7**	**49.85**	**90**	**1,465,175**	**7.8**	**127.73**
I.D. #8	**7**	**1**	**1,000**	**142.85**	**142.85**	**5**	**3,801**	**71.4**	**54.30**
I.D. #9	1,425	1	4,000	.7	2.80	77	942,472	5.4	66.13
Banff	6,960	3	66,005	.4	9.48	126	6,780,777	1.8	97.42
Total	**8,385**	**4**	**70,005**	**.4**	**8.34**	**203**	**7,723,249**	**2.4**	**92.10**
I.D. #12	10	1	8,000	100.0	800.00	47	718,019	470.0	7,180.19
Jasper	4,465	4	10,200	.8	2.28	81	818,166	1.8	18.32
Total	**4,475**	**5**	**18,200**	**1.1**	**4.06**	**128**	**1,536,185**	**2.8**	**34.32**
I.D. #13	**29**	—	—	—	—	**4**	**76,875**	**13.7**	**265.08**
I.D. #14	8,192	63	5,759,685	7.6	703.08	591	34,374,186	7.2	419.60
Wildwood	361	—	—	—	—	10	226,956	2.7	62.86
Evansburg	750	—	—	—	—	23	219,661	3.0	29.28
Edson	7,323	14	254,492	1.9	34.75	170	2,370,071	2.3	32.36
Hinton	8,846	15	264,445	1.6	29.89	339	4,489,588	3.8	50.75
Total	**25,472**	**92**	**6,278,622**	**3.6**	**246.49**	**1,133**	**41,680,462**	**4.4**	**163.63**
I.D. #15	2,854	27	681,426	9.4	238.76	227	3,984,917	7.9	139.62
Whitecourt	6,126	17	150,925	2.7	24.64	215	1,745,512	3.5	28.49
Ft. Assiniboine	214	—	—	—	—	7	113,265	3.2	52.92
Total	**9,194**	**44**	**832,351**	**4.7**	**90.53**	**449**	**5,843,694**	**4.8**	**63.55**
I.D. #16	5,332	48	1,305,183	9.0	244.78	511	15,306,447	9.5	287.06
Valleyview	2,218	7	46,381	3.1	20.91	79	1,045,778	3.5	47.14
Fox Creek	2,068	3	81,554	1.4	39.43	35	1,305,865	1.6	63.14
Grande Cache	3,646	6	60,934	1.6	16.71	47	884,420	1.2	24.25
Total	**13,264**	**64**	**1,494,052**	**4.8**	**112.63**	**672**	**18,542,510**	**5.0**	**139.79**
I.D. #17	12,534	116	1,172,027	9.2	93.50	1,102	26,219,810	8.7	209.18
High Prairie	2,817	12	60,224	4.2	21.37	106	7,118,467	3.7	252.69
Swan Hills	2,407	2	2,045	.8	.84	55	747,272	2.2	31.04
Kinuso	282	1	2,000	3.5	7.09	12	83,572	4.2	29.63
Slave Lake	5,611	9	533,405	1.6	95.06	146	2,527,506	2.6	45.04
Nampa	464	—	—	—	—	9	1,008,300	1.9	217.30
Total	**24,115**	**140**	**1,769,701**	**5.8**	**73.38**	**1,430**	**37,704,927**	**5.9**	**156.35**

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Municipal Fire Loss Statistics
for the Year Ending December 31, 1988 (cont'd)

Municipality	1988 Population	1988 Fire Count	1988 Amount Of Loss	1988 Fire Rate	1988 Per Capita Loss	10 Year Total Fire Count	10 Year Total Amount Of Loss	10 Year Average Fire Rate	10 Year Average Per Capita Loss
I.D. #18	10,498	78	2,230,492	7.4	212.46	888	180,704,691	8.4	1,721.32
Lac La Biche	2,553	20	1,056,912	7.8	413.98	112	1,942,388	4.3	76.08
Plamondon	236	1	9,000	4.2	38.13	6	42,752	2.5	18.11
Total	**13,287**	**99**	**3,296,404**	**7.4**	**248.09**	**1,006**	**182,689,831**	**7.5**	**1,374.95**
I.D. #19	1,620	12	133,775	7.4	82.57	144	2,381,821	8.8	147.02
Wanham	238	—	—	—	—	12	87,784	5.0	36.88
Eaglesham	191	—	—	—	—	4	25,014	2.0	13.09
Total	**2,049**	**12**	**133,775**	**5.8**	**65.28**	**160**	**2,494,619**	**7.8**	**121.74**
I.D. #20	**2,922**	**19**	**330,343**	**6.5**	**113.05**	**139**	**2,076,446**	**4.7**	**71.06**
I.D. #21	2,992	21	279,276	7.0	93.34	219	3,075,128	7.3	102.77
Hines Creek	513	4	93,737	7.7	182.72	29	1,025,372	5.6	199.87
Total	**3,505**	**25**	**373,013**	**7.1**	**106.42**	**248**	**4,100,500**	**7.0**	**116.99**
I.D. #22	4,451	38	912,443	8.5	204.99	385	6,695,279	8.6	150.42
Manning	1,144	6	2,131,227	5.2	1,862.96	40	2,492,151	3.4	217.84
Total	**5,595**	**44**	**3,043,670**	**7.8**	**543.99**	**425**	**9,187,430**	**7.5**	**164.20**
I.D. #23	6,942	33	583,520	4.7	84.05	471	8,997,025	6.7	129.60
High Level	3,004	15	380,461	4.9	126.65	128	4,353,988	4.2	144.93
Rainbow Lake	1,146	—	—	—	—	20	1,552,352	1.7	135.45
Total	**11,092**	**48**	**963,981**	**4.3**	**86.90**	**619**	**14,903,365**	**5.5**	**134.36**
I.D. #24	**282**	**—**	**—**	**—**	**—**	**8**	**5,296,013**	**2.8**	**1,878.01**
Indian Reserves	**33,733**	**81**	**2,029,014**	**2.4**	**60.14**	**878**	**18,200,319**	**2.6**	**53.95**
S.A. #2	2,553	16	592,764	6.2	232.18	159	2,058,498	6.2	80.63
Hanna	3,017	2	17,257	.6	5.71	63	832,323	2.0	27.58
Total	**5,570**	**18**	**610,021**	**3.2**	**109.51**	**222**	**2,890,821**	**3.9**	**51.89**
S.A. #3	1,691	11	97,707	6.5	57.78	107	1,514,320	6.3	89.55
Cereal	251	—	—	—	—	2	62,139	.7	24.75
Oyen	1,010	2	394	1.9	.39	28	160,965	2.7	15.93
Youngstown	294	1	22,000	3.4	74.82	8	79,786	2.7	27.13
Total	**3,246**	**14**	**120,101**	**4.3**	**36.99**	**145**	**1,817,210**	**4.4**	**55.98**
S.A. #4	1,766	4	543,514	2.2	307.76	110	1,868,616	6.2	105.81
Veteran	312	—	—	—	—	13	1,881,975	4.1	603.19
Consort	674	—	—	—	—	19	697,814	2.8	103.53
Total	**2,752**	**4**	**543,514**	**1.4**	**197.49**	**142**	**4,448,405**	**5.1**	**161.64**

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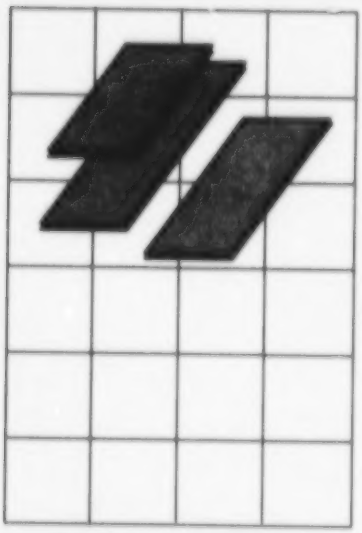
Municipal Fire Loss Statistics

for the Year Ending December 31, 1988 (cont'd)

Cities	1988					10 Year Total		10 Year Average	
	Population	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss	Fire Count	Amount Of Loss	Fire Rate	Per Capita Loss
Airdrie	10,957	21	133,906	1.9	12.22	165	1,250,734	1.5	11.41
Calgary	657,118	2,130	11,623,012	3.2	17.68	27,111	153,859,836	4.1	23.41
Camrose	12,968	29	445,914	2.2	34.38	303	4,106,308	2.3	31.66
Drumheller	6,366	20	406,449	3.1	63.84	201	4,599,845	3.1	72.25
Edmonton	576,249	1,505	10,621,905	2.6	18.43	16,460	154,233,103	2.8	26.76
Fort McMurray	34,949	124	1,160,258	3.5	33.19	1,717	12,567,694	4.9	35.96
Fort Saskatchewan	11,983	33	277,413	2.7	23.16	256	12,800,129	2.1	106.81
Grande Prairie	26,648	104	384,387	3.9	14.42	1,523	7,812,203	5.7	29.31
Leduc	13,126	33	170,988	2.5	13.02	321	2,402,752	2.4	18.30
Lethbridge	60,610	171	1,403,480	2.8	23.15	2,777	16,335,539	4.5	26.95
Lloydminster	10,201	23	146,515	2.2	14.36	284	3,073,887	2.7	30.13
Medicine Hat	42,290	134	705,439	3.1	16.68	2,171	16,969,020	5.1	40.12
Red Deer	54,839	122	592,542	2.2	10.80	1,905	11,038,843	3.4	20.12
St. Albert	38,318	49	128,239	1.2	3.34	1,148	6,395,712	2.9	16.69
Spruce Grove	11,918	23	117,162	1.9	9.83	354	2,845,840	2.9	23.87
Wetaskiwin	10,103	31	348,376	3.0	34.48	225	9,487,336	2.2	93.90

SECTION 3



Glossary

Glossary

Act or Omission

The human element by which someone has done something (an act) or failed to do something (an omission). The act or omission indicates whether the fire was deliberate, neglectful or accidental.

Incendiary or Set Fires - includes arson, suspected incendiarism, riot, mischief or vandalism.

Misuse of Source of Ignition - includes disposal of smoker's material, thawing, inadequate control of an open fire, children playing, welding or cutting too close to combustible material or torch too close to combustible material.

Misuse of Material Ignited - includes fuel spilled accidentally, improper fuelling technique, cleaning or washing parts, improper container, overheated cooking oil, combustible placed too close to heat, and improper storage.

Mechanical and Electrical Failure or Malfunction - includes part failure, automatic or manual control failure, electrical short circuit and part worn out.

Construction, Design or Installation Deficiency - includes construction or design deficiency, installation too close to a combustible, other installation deficiency and overfusing.

Misuse of Equipment - overfuelling, includes any misuse of equipment or tools.

Human Failing - includes person asleep, temporary loss of judgement, physical disability, panic, influence of alcohol or drugs and ignorance of hazard.

Area of Origin

The area of a building or vehicle where the fire started.

Means of Egress - the area allowing an individual transit or a way of going out. Includes hallway, stairway, escalator, lobby and elevator.

Assembly, Sales Area - areas where groups of people gather. Includes theatre, arena, lounge, living room, sales or show room, library, museum and sports facility.

Function Area - the area where a mode of action or activity is undertaken. Includes sleeping area, dining area, bar, washroom, office, laboratory, printing and photographic reproduction, kitchen, laundry room, operating room, performance area and manufacturing area.

Storage Area - the area inside a building where items are stored. Includes product storage area, closet, equipment area, records storage area, shipping and receiving area, trash and rubbish area, vehicle garage and agricultural product storage.

Service Facilities - conveyance items such as dumbwaiters, service shafts, laundry and garbage chutes, heating and cooking ducts and chimneys or gas vents.

Structural Area - includes crawl space, balcony, ceiling and floor assembly, ceiling and roof assembly, wall assembly, exterior wall or exterior roof and awning or canopy.

Vehicle Area - includes engine area, fuel area, control area, passenger area and cargo area.

Outside Area - includes open area such as lawn, field or park, court, patio, parking area, outdoor storage area and trash or rubbish area.

Death

A person killed accidentally as a direct result of a fire or a person who dies from a fire injury within one year following the date on which the injury was sustained.

Fire Death - refers to a person who died as a direct result of a fire, either by smoke inhalation or burns.

Death Involving Fire - refers to a person who was in a place where fire occurred, but who may have died from a cause other than the fire itself (eg. a person who dies in an automobile accident where the vehicle catches fire prior to death, a suicide by burning or asphyxia, an incendiary fire set for the specific reason of killing).

Fuel or Energy

Is the fuel associated with the source of ignition. Includes coal, wood, fuel oil, gasoline, natural gas or other fuel gases, smoker's material, electricity, lightning or exposures.

Ignition Scenario

The combination of three components - the source of ignition, material first ignited and act or omission - in the chain of events that lead to a fire.
A small number of ignition scenarios recur in the ignition of fires that account for the majority of fire incidents. Identification of these helps locate problems more specifically for the design of appropriate prevention strategies.

Injuries

A person accidentally injured as a direct result of a fire (a member of the fire department accidentally injured while in the process of fighting a fire or injured as a result of an accident while en route to or returning from the scene of an actual fire is considered a fire action injury.)

Minor Injury - an injury that does not require hospitalization of over a 24-hour period or absence from work of not more than one full day.

Light Injury - an injury that requires admission to a hospital of over 24 to 48 hours and/or absence from work for a period of two to fifteen days.

Serious Injury - an injury that requires admission to a hospital for a period of more than 48 hours and/or an absence from work for a period exceeding fifteen days.

Material First Ignited

The actual material that ignites and creates the fire condition.

Structural Components, Finish Materials - includes roof covering, wall covering, floor covering, structural component, ceiling covering and insulation.

Furniture, Furnishings - includes furniture, ironing board, mattress, bedding, drapery and broom, mop or brush.

Clothing, Textiles - includes clothing, fabric, fur and tarpaulin.

Wood, Paper Products - includes wood, wood shavings, paper, cardboard and paper stock.

Flammable Liquids - includes gasoline, fuel oil, flammable liquids, paint, varnish, tar, asphalt, polish and wax.

Flammable Gases - includes natural gas, propane, anaesthetic gas, acetylene and hydrogen.

Chemicals - includes starch, flour, cellulose nitrate, plastic, oxidizing material, magnesium and alloys, titanium, natural or synthetic rubber and ammonium nitrate.

Agricultural, Forestry Products - includes fibres, grains, hay, trees, felled timber, grass, fertilizer and manure.

Miscellaneous - includes coal, garbage, trash, oily rags and artificial trees.

Property Classification

The principal use or occupancy of the building.

Assembly - property for the gathering of persons for civic, political, travel, religious, social, educational or recreational purposes. Includes theatres, amusement or recreation places, schools, colleges, universities, churches, social or sport clubs, libraries and museums, eating establishments and passenger terminals.

Institutional - property for medical treatment, or care of persons suffering from illness, disease or infirmity, for the care of infants, convalescents or aged persons and for penal or corrective purposes. Includes prisons, jails, reformatories, homes for the aged, children's hospitals, hospitals and clinics.

Residential - property in which sleeping accommodation is provided for normal residential purposes. Includes one and two family dwellings, apartments, rooming or boarding houses, hotels, motels, dormitories and mobile homes.

Business and Personal Service - property for conducting business. Includes offices, personal services such as hairdressing and data processing or storage facilities.

Mercantile - property used for the display and sale of merchandise. Includes food and beverage sales, textile and clothing sales, furniture and appliance sales, books and specialty sales, recreational and hobby supply sales, repair shops, laundries, vehicle and boat sales and department or variety stores.

Industrial Manufacturing Properties - property where raw materials are transformed into new products and where the component parts of manufactured products are assembled. Includes chemical, petroleum, paint and plastic manufacturing; wood, furniture, and paper manufacturing; metal product and electrical equipment manufacturing; food processing; beverage, tobacco, soap and margarine manufacturing; textile manufacturing; footwear and wearing apparel manufacturing; and vehicle and related equipment manufacturing.

Storage Properties - property used primarily for the storage or sheltering of goods, merchandise, products, vehicles, or animals. Includes agricultural product storage; textile, fibre and clothing storage; processed food and beverage storage; flammable liquids, gas and petroleum products storage; wood, furniture, and paper products storage; chemical, paint and plastic storage; metal products, machinery, and electrical appliance storage and vehicle storage.

Special Property-Transportation Equipment - mainly outdoor property and transport equipment. Includes outdoor property, piers, buildings under construction or demolition, watercraft, rail transport vehicles, ground transport vehicles, aircraft and other special equipment.

Miscellaneous - includes laboratories, farm facilities, outbuildings, utilities, glass and pottery manufacturing, mining, communications and nucleonics.

Source of Ignition

The actual equipment, device or object which brings about ignition.

Cooking Equipment - includes stove, range, food warming appliance, deep fat fryer, broiler and portable cooking unit.

Heating Equipment - includes central heating unit, service water heater, space heater, fireplace, chimney, flue pipe and steam or hot water pipe.

Appliance and Equipment - includes dryer, air conditioning equipment, pressing iron and incinerator.

Smoker's Material and "Open" Flames - cigarettes, pipes, cigars and/or matches, lighters when used in conjunction with smoking. Includes matches and lighters not associated with smoker's material, candles, cutting torches, welding equipment and hot ashes.

Exposure - includes exposure from an attached or detached structure, lumber yard, open fire, forest, grass and brush.

Miscellaneous - includes internal combustion engine, heat treatment equipment, industrial oven, tar pot, fireworks, conveyors, commercial and industrial machinery and chemical reactions.

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